COMPUTER

+

Peripheral Units

GRAFIC

User's manual

HYDROCARBON - V. 6.00

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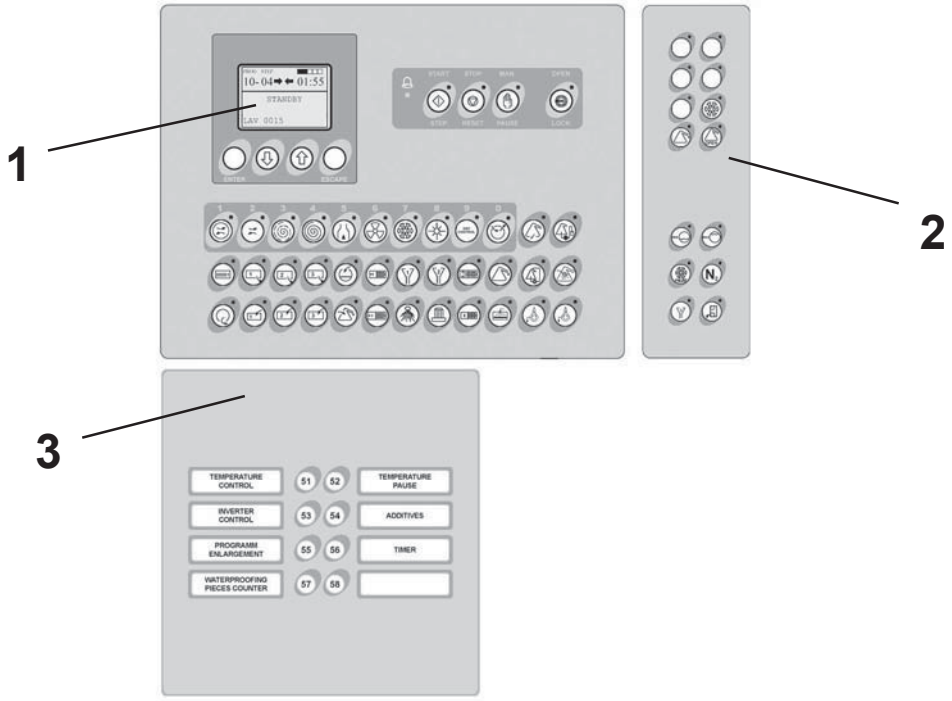
5.0 CONTROL PANEL

The control panel is located on the front of the machine and enables the user to carry out the various wash cycles and monitor the functions of the machine.

The control panel has three components:

1) COMPUTER
2) ADDITIONAL KEYBOARD
3) ADDITIONAL CONTROL PANEL



5.1 GENERAL DESCRIPTION

Computer is a powerful and versatile control computer for washing machines at perchlorate and hydrocarbons. It is made to be munted on the electrical panel, it has a display at LCD with graphical capacities and a keyboard with switches at tactile sensation and with a very powerful lighting.

Computer offers a menu guided functioning, in order to facilitate its use. It has several options, for example the possibility to chose the language among a choice of five different languages, according to the country of destination. The supported languages are the following: Italian, French, English, German and Spanish.

Computer can memorize up to 20 programs, which can be set out directly through the keyboard or collected through serial Memory Card, avoiding in this way to waste time in programming.

Computer easly connects to a wide range of accessories by using a standard bus cable. It has a serial port RS485 to connect one or more inverters or to monitor through PC.

Moreover, it uses a **Flash** memory, which enables to easly update the machine firmware without replacing EPROM and E²PROM of program and data: this memory is guaranteed for at least 10 millions writings.

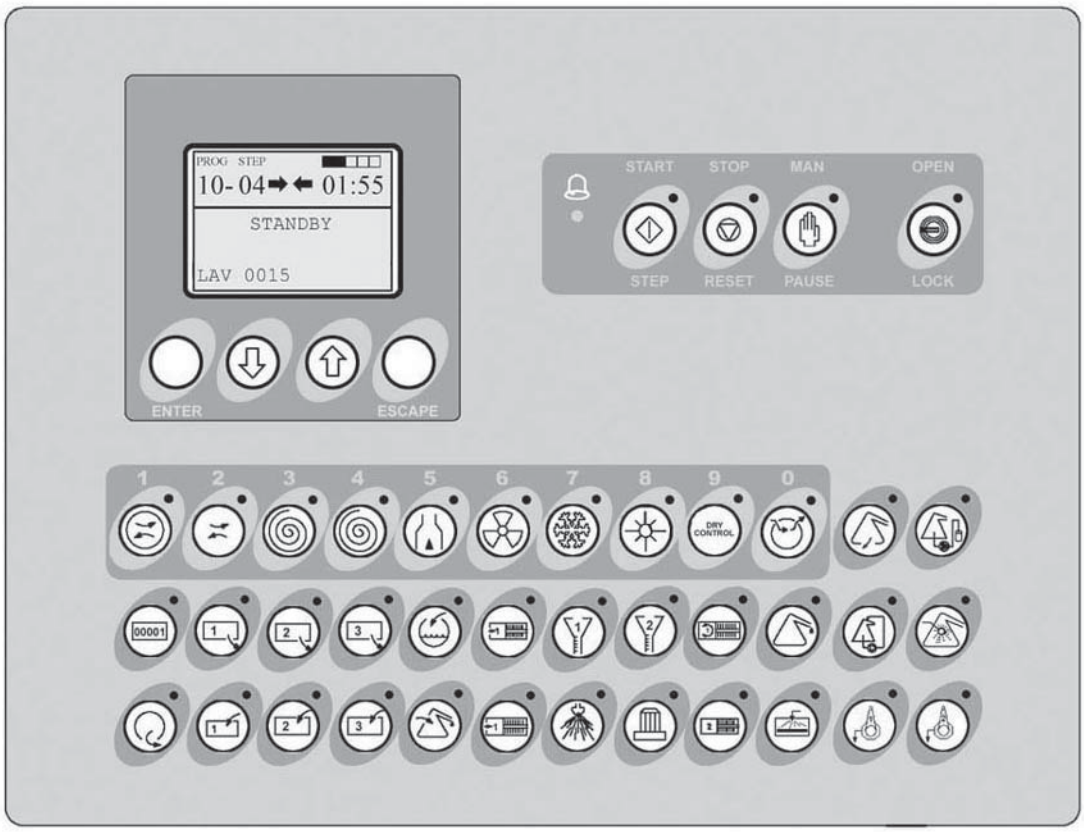
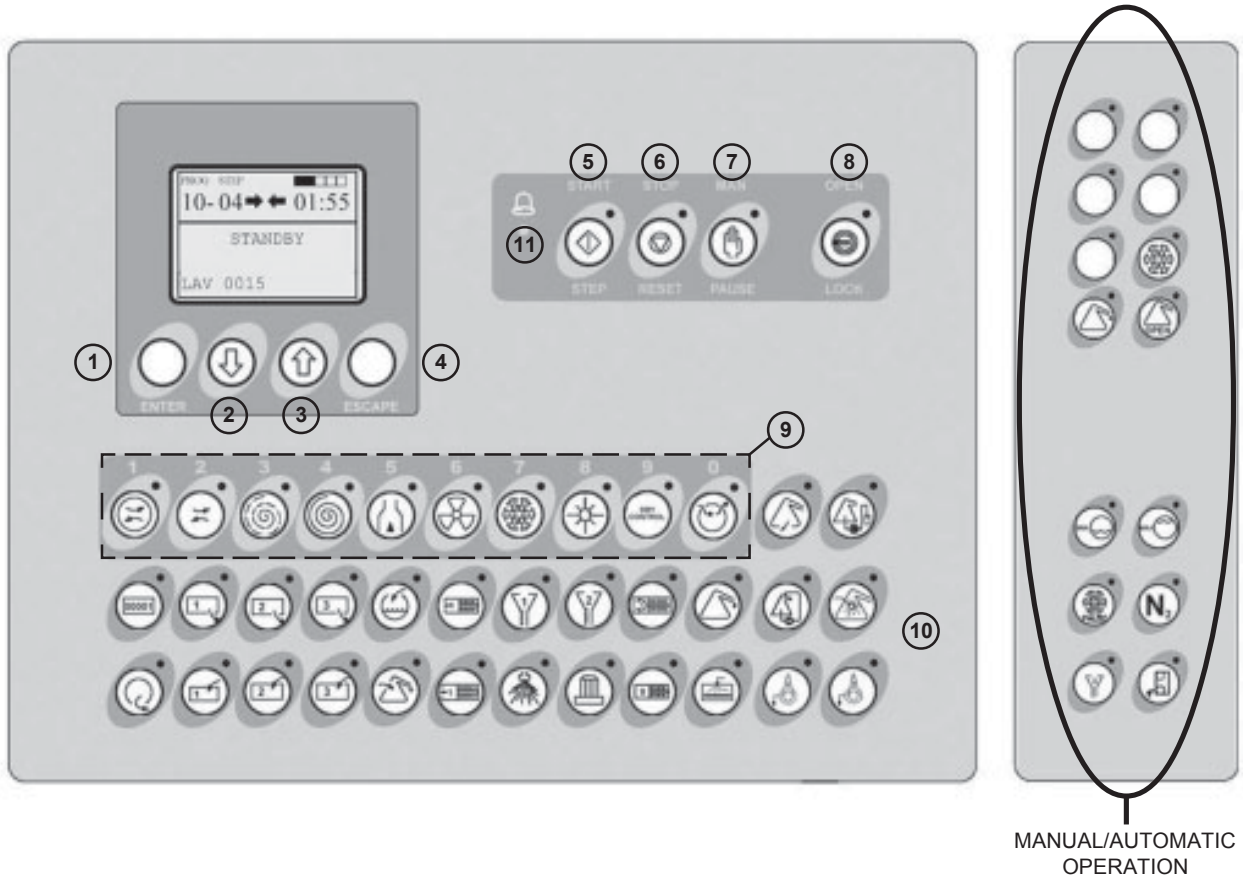


Fig.05-02

5.2 TECHNICAL FEATURES

Outlets	: 48, at relay of 5 A 250 VCA on resistant load.
Digital Inlets	: 39 inlets + outlet Vcc common to all inlets.
Feed	: 12 Vca 50/60 Hz
Display	: LCD high contrast, retroilluminated.
Manual switches	: 36 yellow when not activated and red when activated, with a pocket to insert symbols or writings.
Digital switches	: in double function, from 0 to 9 through yellow switches form 1 to 10.
Function switches	: 8, among whose 4 illuminated when activated.
Programs	: 20 programs, each with 39 steps. Connector for Memory card.
Step time	: 0-255 seconds or 0-255 minutes.
Fixing	: Aluminium panel board on the electrical panel.
Fuse protection	:Protection of the inlets logic card through delayed fuse 5 x 20 mm at 2AT.

5.3 COMPUTER SWITCHES



5.3.1 SWITCHES CONFIGURATION

1) "**ENTER**"

In operative mode it selects the different information, which can be visualized on the display, in menu mode it selects the visualized item or it enables the values variation.

2) ↙

In standby it selects the program, in menu mode it selects the items or it modifies the values.

3) ↗

In standby it selects the menus, in menu mode it selects the items or it modifies the values.

4) "**ESCAPE**"

It exits from menu mode and returns to operative mode. When the display visualizes the messages of programmed maintenance, if kept pressed, it causes its zero setting.

5)

"START/STEP"
In operative mode it starts the cycle; when the cycle is running, it leads to the following step.

6)

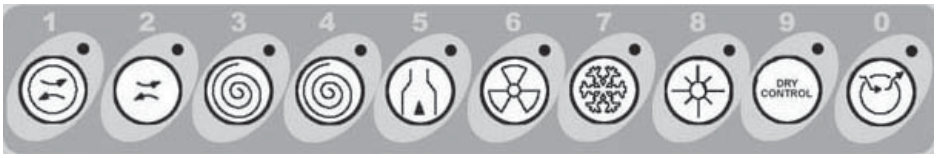
"STOP/RESET"
In operative mode it interrupts the cycle execution; when the cycle is interrupted it ends its execution.

7)

"MANUAL/PAUSE"
When the cycle is running, it puts into pause the running step; if none cycle is runnig, it enables the manual functioning and vice versa.

8)

"OPEN/LOCK
It opens and closes the loading door.

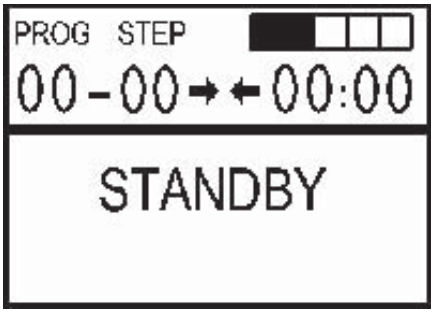
9) 

The first function switches row from 1 to 10, in menu mode enables the direct introduction of numbers, alternatively to switches ↙ and ↗ .

10) FROM **TO** **(** **)**

They enable the different functions manually or through the programming.

11) GRAPHIC DISPLAY



It shows all the runnign operations and the computer state.

5.3.2 SWITCHES DESCRIPTION AND FUNCTION

Computer switches have the following functions:

WASHING MOTOR
with STANDARD alternating rotation (see time table).

WASHING MOTOR
with alternating rotation for DELICATE FABRICS (see time table).

SLOW EXTRACT SPEED
only for those washing machines equipped with 2 extract speeds, or equipped with motor and inverter controlled by **ADDITIONAL CONTROL PANEL**.

FAST EXSTRACT SPEED
it starts up the motor for the fast extract speed.
In motor with inverter version, the speed is controlled by **ADDITIONAL CONTROL PANEL**.

NOT USED

FAN MOTOR
for the drying and the deodorization.
NOTE: to be activated this button must be pressed for 5÷6 sec.

REFRIGERATION UNIT
for the drying, the deodorization and the solvent cooling (In line solvent cooling with FREON).

HEATER
for the drying.

DRY CONTROL
it begins the DRY CONTROL for the automatic control of the drying time.

NOT USED

IMPULSES COUNTER
It puts the load counter 1 unit forward if it is pressed in the last program step.

TANK 1 SUCTION
it leads the solvent from the first tank to the pump.

TANK 2 SUCTION
it leads the solvent from the second tank to the pump.

TANK 3 SUCTION
it leads the solvent from the third tank to the pump.

DIRECT INLET
it leads the solvent in the drum through the pump.

FILTER 1 INLET
it inserts the first filter in the solvent circuit.

SOAP 1
it withdraws the soap from the first dispenser (pump).

SOAP 2
it withdraws the soap from the second dispenser (pump or additives container).

FILTER 1 MOTOR
it makes the first filter disc rotate during the maintenance.

DISTILLATION
it enables the still heater.

DRUM SUCTION
it enables the solvent inlet from the drum towards the pump, through the button trap.

TANK 1 INLET
it enables the solvent entry in the first tank through the pump.

TANK 2 INLET
it enables the solvent entry in the second tank through the pump.

TANK 3 INLET
it enables the solvent entry in the third tank through the pump.

STILL INLET
it enables the solvent entry in the still through the pump.

FILTER 2 INLET (Optional)
it inserts the second filter in the solvent circuit.

SPRAY (Optional)
it puts into action the water-proofing system.

PUMP MOTOR
it puts into action the solvent pump.

FILTER MOTOR 2
it makes the second filter discs rotate during the maintenance.

SELF CLEANING LINT FILTER (Optional)
it leads the solvent to the air filter.

STILL RESIDUES DISCHARGE
it allows to discharge the residues to the sludge container.

STILL RESIDUES EJECTION

NOT USED

SOLVENT HEATER (Optional)

FIRST FILTER HALF EMPTIYNG
It allows to send in the basket one half of the solvent gathered in the 1° filter.

SECOND FILTER HALF EMPTYING (Optional)
It allows to send in the basket one half of the solvent gathered in the 2° filter.

The push buttons of the **ADDITIONAL KEYBOARD** model have the following functions:

FILTER 1 AIR BLEEDING
It allows to vent air from the filter 1.

FILTER 2 AIR BLEEDING (Optional)
It allows to vent air from the filter 2.

BACK DRUM WASHING
It allows to wash with solvent the rear of the basket.

DRYING SEPARATOR DRAIN
It allows the complete drain of the drying separator by using the solvent pump.

STILL SEPARATOR DRAIN
It allows the complete drain of the still separator by using the solvent pump.

DRYING SEPARATOR WATER DRAIN
It allows the water drain from the drying separator into the contact water collector.

END DISTILLATION
It allow to end the distillation after the filter preparation

STILL OPENING
the still may be opened in combination with key **"OPEN/LOCK".**

NOT USED

NOT USED

STILL SEPARATOR RINSE
It allows the internal cleaning of the still separator by solvent spray.

DRYING SEPARATOR RINSE
It allows the internal cleaning of the drying separator by solvent spray.

SOAP 3 (Optional)
it withdraws the soap from the third dispenser.

DISCHARGE SOLVENT FROM DRYING SEPARATOR
it allows to take the solvent from the drying separator.

The push buttons of the **ADDITIONAL CONTROL PANEL** model have the following functions:

51	TEMPERATURE CONTROL	Allows you to control all the temperatures possible on the machine.
52	TEMPERATURE PAUSE	Lets you pause the computer until the machine reaches the programmed temperature.
53	CONTROL INVERTER	Allows you to regulate any wash or spin speed automatically.
54	ADDITIVES	Allows you to choose the dose quantity of detergents 1 and 2.
55	PROGRAM ENLARGEMENT	Allows you to lengthen any step of a program during operation.
56	TIMER	Allows you to set a temporary different wash time to the memorized program.
57	WATER PROOFING PIECES COUNTER	Allows you to set the number of pieces you wish to water-proof.
58		NOT USED

5.4 GRAPHIC SYMBOLS ON THE DISPLAY

For every operativity state, the following symbols are visualized on the Computer display:

STANDBY: it means that the computer in waiting for instructions.

PROGRAM EXECUTION: it means that the computer is executing a program.

PROGRAM PAUSE : it means that the program is in pause, keeping all outlets of the programmed funcions active.

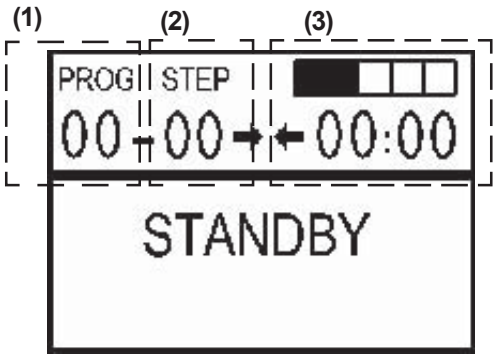
STOP: it stops the program and disconnects all outlets of the programmed functions.

MANUAL OPERATIONS: it means that the switches functioning is direct.

MENU: you can have access to all menu types of the computer.

ALARM: it gives note to all alarms which have occured.

ALLARM END: it shows the alarm end or the previously occured alarms.



1) **PROG:** it shows the number of the selected program;

2) **STEP:** it shows the number of the running step of any program;

3) It shows the execution step of a cycle:

a)

:It shows the time passed from the cycle strart;

b)

: It shows the time passed from the beginning of any step;

c)

:It shows the lacking time to complete any step;

d)

:It shows the lacking time to the end of the program.

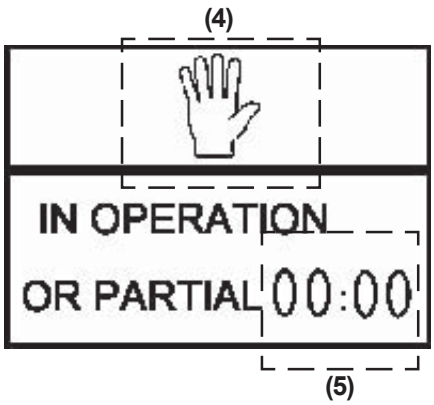
The execution time of a cycle can be programmed in the following way:
When a cycle begins, by pressing the switch "**ENTER**" you can select any execution step.
This time will be visualized during the cicle.

4) It shows that the computer can execute manual operations.

5) It shows the manual mode duration, which can be **IN OPERATION** or **PARTIAL**:

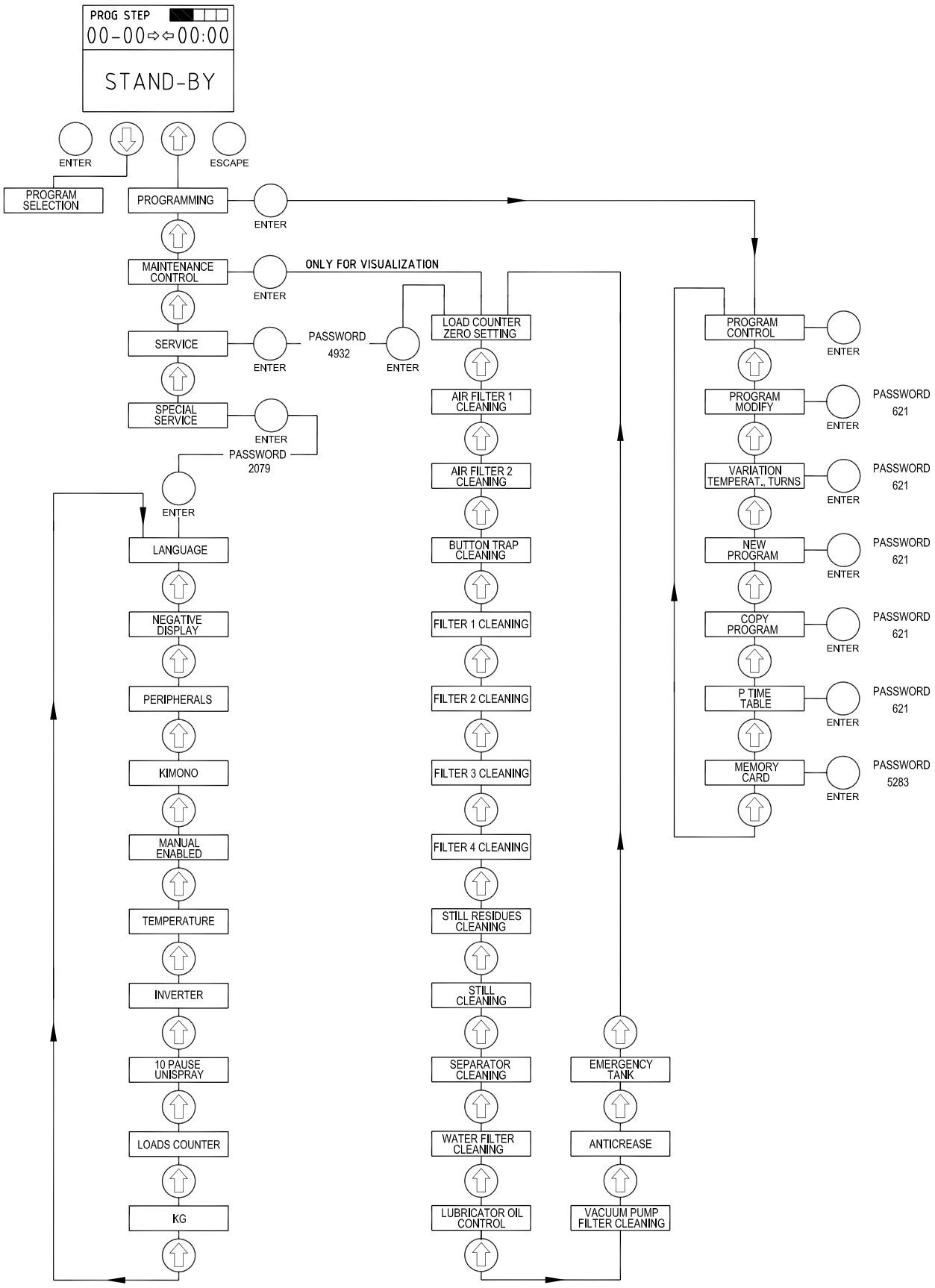
a) **IN OPERATION** it shows the total time passed from the manual switch "**MANUAL/PAUSE**" insertion.

b) **PARTIAL** it shows the time during which the last pressed switch remains active.



NOTE: *To pass from mode IN OPERATION mode to PARTIAL mode or vice versa, press* "**ENTER**" .

5.5 MENU CONFIGURATION



5.6 PROGRAMS HANDLING

5.6.1 PROGRAM SELECTION

The selection of any program can be made when the computer is in standby.

By pressing the switch ↙ the writing **PROGRAM SELECTION** will appear and the running program number will lighten.

To increase or decrese this number, press the switches ↙ ↗

To memorize the chosen number press "**ENTER**".

5.6.2 PROGRAM CONTROL

To have access to the control of an already existing program, proceed in the following way:

1) Select the program number to control (see **PROGRAM SELECTION**).
2) The computer must be on **STANDBY**.
3) Press the switch ↗ to visualize **PROGRAMMING**.
4) Press "**ENTER**" to visualize **PROGRAM CONTROL**.
5) Press "**ENTER**" to visualize the first STEP.
6) To verify all the STEPS, press the switches ↙ ↗
7) After the last STEP the computer will return on **STANDBY**. If you want to quit before the conclusion of the last STEP, press "**ESCAPE**" .

NOTE: *In **PROGRAM CONTROL** you can only control all the STEPS or begin the program from the desired STEP. Any variations are allowded.*

5.6.3 PROGRAM MODIFICATION

To modify an already existing program, proceed in the following way:

1) Select the program number to modify (see **PROGRAM SELECTION**);
2) The computer must be on **STANDBY**;
3) Press the switch ↗ to visualize **PROGRAMMING**;
4) Press "**ENTER**" to visualize **PROGRAM CONTROL**;
5) With the switch ↗ run over the menu up to **PROGRAM MODIFICATION**;
6) Press "**ENTER**";
7) Give the password n° **621** by pressing the digital switch;
8) Press "**ENTER**" to visualize the first STEP;
9) With the switches ↙ ↗ run over the menu till you reach the STEP to modify, wich wil ligthen.
10) Now you can insert or not the desired functions by pressing the digital switches from 1 to 36.
11) Press "**ENTER**" to confirm the functions. After that, the time will lighten.
12) Insert the desired time through the digital switch;
13) Press "**ENTER**" to confirm and SECONDS or MINUTES will lighten.
14) By pressing "**ENTER**" you can select MINUTES or SECONDS.
15) Press ↗ and the following STEP will lighten.

NOTE: *To modify other STEPS proceed in the same way.*

16) To escape from the menu **PROGRAM MODIFICATION** press "**ESCAPE**" twice and you will return on STANDBY mode.

5.6.4 INSERTION OF A STEP INTO AN EXISTING PROGRAM

To insert a step into an existing program proceed in the following way:

1) Select the program into which inserting the STEP (see **PROGRAM SELECTION**).
2) The computer must be on **STANDBY** mode.
3) Press the switch ↗ to visualize **PROGRAMMING**.
4) Press "**ENTER**" to visualize **PROGRAM CONTROL**.
5) With the switch ↗ run over the menu up to **PROGRAM VARIATION**.
6) Press "**ENTER**" ;
7) Give the password n°**621** by pressing the digital switch;
8) Press "**ENTER**" to visualize the first STEP.
9) For example: you want to insert a STEP between number 8 and 9.
10) With the switches ↙ ↗ run over the menu up to STEP n°9;
11) Press once "**ESCAPE**" to visualize **PROGRAM ESCAPE**.
12) With the switch ↗ run over the menu up to **STEP INSERTION,** which will lighten.
13) Press "**ENTER**" and wait for the insertion operation.
14) Insert exactly the desired functions.
15) Press "**ENTER**" and the time will lighten.
16) Insert the desired time by pressing the digital switch.
17) Press "**ENTER**" and minutes or seconds will lighten.
18) With the switch ↗ select minutes or seconds.
19) Press "**ENTER**" and STEP n°10 will lighten.
20) Press twice "**ESCAPE**" to return on **STANDBY**.

***NOTE**: In this way we have added a STEP. Therefore the program results a STEP longer.*

5.6.5 STEP ANNULMENT FROM A PROGRAM

To annul a STEP inside an existing program, proceed in the following way:

1) Select the program from which you want to annul the STEP (see **PROGRAM SELECTION**).
2) The computer must be on **STANDBY**.
3) Press the switch ↗ to visualize the **PROGRAMMING**.
4) Press "**ENTER**" to visualize **PROGRAM CONTROL**.
5) With the switch ↗ run over the menu up to **PROGRAM VARIATION**.
6) Press "**ENTER**" .
7) Give the password n°**621** by pressing the digital switch;
8) Press "**ENTER**" to visualize the first STEP.
9) For example, if you want to annul STEP n°9, proceed in the following way:
10) With the switches ↙ ↗ run over the menu up to STEP n°9;
11) Press once "**ESCAPE**" to visualize **PROGRAM ESCAPE**;
12) With the switch ↗ run over the menu up to **STEP ANNULMENT**, which will lighten;
13) Press "**ENTER**" and wait for the annulment operation;
14) Press twice "**ESCAPE**" to return on **STANDBY**.

***NOTE**: In this way we have cancelled STEP n°9; therefore the program results a STEP shorter.*

5.6.6 ANNULMENT OF THE LAST STEP OF A PROGAM

To annul the last STEP of an existing program, proceed in the following way:

1) Select the program from which you want to annul the STEP (see **PROGRAM SELECTION**).
2) The computer must be on **STANDBY**.
3) Press the switch ↗ to visualize the **PROGRAMMING**.
4) Press "**ENTER**" to visualize **PROGRAM CONTROL**.
5) With the switch ↗ run over the menu up to **PROGRAM VARIATION**.
6) Press "**ENTER**" .
7) Give the password n°**621** by pressing the digital switch;
8) Press "**ENTER**" to visualize the first STEP.
9) With the switches ↙ ↗ run over the menu up to the last STEP.
10) Press "**ENTER**" and disconnect the programmed function switches.
11) Press "**ENTER**" and the time will lighten;
12) Insert 000 in the time, by using the digital switch;
13) Press "**ENTER**" and the seconds will lighten;
14) Press "**ESCAPE**" twice to return on **STANDBY**.

***NOTE**: In this way we have cancelled the last STEP; therefore the program results a STEP shorter.*

5.6.7 NEW STEP INSERTION AT THE END OF A PROGRAM

To add a STEP at the end of an existing program, proceed in the following way:

1) Select the program into which you want to insert the STEP (see **PROGRAM SELECTION**).
2) The computer must be on **STANDBY**.
3) Press the switch ↗ to visualize the **PROGRAMMING**.
4) Press "**ENTER**" to visualize **PROGRAM CONTROL**.
5) With the switch ↗ run over the menu up to **PROGRAM VARIATION**.
6) Press "**ENTER**".
7) Give the password n°**621** by pressing the digital switch;
8) Press "**ENTER**" to visualize the first STEP.
9) With the switches ↙ ↗ run over the menu up to the last STEP, that is to say the one which has not been programmed.
10) You will see the STEP lighten. Now you can insert the desired functions.
11) Press "**ENTER**" and the time will lighten.
12) Insert the desired number by pressing the digital switch.
13) Press "**ENTER**" and the seconds will lighten.
14) With the switch ↗ select MINUTES or SECONDS.
15) Press "**ENTER**" to visualize the following STEP.
16) Press twice "**ESCAPE**" to return on **STANDBY**.

***NOTE**: In this way we have added a further STEP at the end of the program, which will therefore results longer.*

5.6.8 NEW PROGRAM INSERTION

To insert a new program, proceed in the following way:

EXAMPLE OF WASHING PROGRAMMING AT ONE BATH ON FILTER 1 AND DRYING (STANDARD) (Program 01).

1) The computer must be on **STANDBY**.

2) Select the program number (01) (see **PROGRAM SELECTION**);

3) Press the switch ↗ to visualize **PROGRAMMING**;

4) Press "**ENTER**" to visulaize **PROGRAM CONTROL**;

5) With the switch ↗ run over the menu till reaching the item **NEW PROGRAM;**

6) Press "**ENTER**".

7) Give the password n° **621** by pressing the digital switch;

8) Press "**ENTER**" to visualize the first STEP to program, which will lighten;

9) Use the programming example (see CARD N°1):

10) (Pump selfpriming)
Press the function switches n° 1-12-22-28.

Confirm with "**ENTER**" and the time will lighten.

11) Insert 2 and 0 by pressing the digital switch, then confirm with "**ENTER**" the seconds will lighten.

12) Press "**ENTER**" to confirm the seconds and the second STEP will lighten ;

13) (Solvent level formation in the drum through the first tank)
Disconnect the previously inserted switches and press the function switches n° 1-12-15-28, then confirm with "**ENTER**" and the time will lighten.

14) Insert 4 and 0 by pressing the digital switch and confirm with "**ENTER**" the seconds will lighten.

15) Press "**ENTER**" to confirm and the third STEP will lighten;

16) (Solvent circulation through the filter 1 with the drum)
Disconnect the previously inserted switches and press switches n° 1-15-16-21-28, confirm with "**ENTER**" and the time will lighten.

17) Insert 7 by pressing the digital switch and confirm with "**ENTER**" ; then the seconds will lighten.

18) Press ↗ to insert the minutes and confirm with "**ENTER**" ; the fourth STEP will lighten;

19) (Solvent return to the first tank)
Disconnect the priviously inserted switches and press the function switches n° 1-21-22-28 and confirm with "**ENTER**" the time will lighten.

20) Insert 3 and 0 by pressing the digital switch and confirm with "**ENTER**" the seconds will lighten.

21) Press "**ENTER**" to confirm, the fifth STEP will lighten.

22) (Spin)
Disconnect the previously inserted switches, press the switches n° 4-21-22-28 and confirm with "**ENTER**" the time will lighten;

23) Insert 3 by pressing the digital switch and confirm with "**ENTER**" the seconds will lighten.

24) Press ↗ to insert the minutes and confirm with "**ENTER**" the sixth STEP will lighten;

25) (Drum stop and discharge)
Disconnect the previously inserted switches, press the switches n° 21-22-28 and confirm with "**ENTER**" the time will lighten;

26) Insert 3 and 0 by pressing the digital switch and confirm with "**ENTER**", the time will lighten;

27) Press "**ENTER**" to confirm, then seventh STEP will lighten.

28) (Drying 1st part)
Disconnect the previously inserted switches, press the switches n° 1-6-7-8 and confirm with "**ENTER**" the time will lighten;

29) Insert 5 by pressing the digital switch and confirm with "**ENTER**" the seconds will lighten.

30) Press ↗ to insert the minutes and confirm with "**ENTER**" the eighth STEP will lighten;

31) (Drying with Dry Control 2nd part)

Disconnect the previously inserted switches, press the switches

n° 1-5-6-7-8-9 and confirm with "**ENTER**" the time will lighten;

32) Insert 2 and 0 by pressing the digital switch and confirm with "**ENTER**" the seconds will lighten.

33) Press ↗ to insert the minutes and confirm with "**ENTER**" the nineth STEP will lighten;

34) (Cooling 3rd part)
Disconnect the previously inserted switches, press the switches

n° 1-6-7-8 and confirm with "**ENTER**" the time will lighten;

35) Insert 3 by pressing the digital switch and confirm with "**ENTER**" the seconds will lighten.

36) Press ↗ to insert the minutes and confirm with "**ENTER**" the tenth STEP will lighten;

37) (Cooling 4th part)
Disconnect the previously inserted switches, press the switches n° 1-6-7 and confirm with "**ENTER**" the time will lighten;

38) Insert 3 by pressing the digital switch and confirm with "**ENTER**" the seconds will lighten.

39) Press ↗ to insert the minutes and confirm with "**ENTER**" the elenenth STEP will lighten;

40) (Cycle end and load counter start)
Disconnect the previously inserted switches, press the switch
n° 11 and confirm with "**ENTER**" the time will lighten;

41) Insert 2 by pressing the digital switch and confirm with "**ENTER**" the seconds will lighten.

42) Press "**ENTER**" to confirm, the twelveth STEP will lighten;

43) Press twice "**ESCAPE**" to quit the program and return on **STANDBY**.

44) Otherwise, by pressing only once "**ESCAPE**" the writing **PROGRAM EXIT**

will appear and by pressing "**ENTER**" you can continue the programming.

By pressing ↗ you can reach the item **YES** and confirming with "**ENTER**" you can quit the program and return on **STANDBY**.

5.6.9 ANNULMENT OF AN EXISTING PROGRAM

To cancel an existing program, proceed in the following way:

1) Select the program to cancel (see **PROGRAM SELECTION**).
2) The computer must be on **STANDBY**.
3) Press the switch ↗ to visualize **PROGRAMMING**.
4) Press "**ENTER**" to visualize **PROGRAM CONTROL**.
5) With the switch ↗ run over the menu up to **NEW PROGRAM**.
6) Press "**ENTER**".
7) Give the password n°**621** by pressing the digital switch;
8) Press "**ENTER**" to visualize the first lighting STEP.
9) Press twice "**ESCAPE**" and **STANDBY** will appear.

***NOTE**: In this way we have cancelled the whole program, therefore it will be an empty program.*

5.6.10 COPY OF AN EXISTING PROGRAM INTO AN EMPTY ONE

To copy an existing program into an empty one, proceed as follows:

For example, you want to copy prog. n°1 into prog. n°10:

1) Select the program number to copy n°1 (see **PROGRAM SELECTION**);
2) The computer must be on **STANDBY**.
3) Press the switch ↗ to visualize **PROGRAMMING**;
4) Press "**ENTER**" to visualize **PROGRAM CONTROL**;
5) With the switch ↗ run over the menu and reach the item **PROGRAM COPY**;
6) Press "**ENTER**" give the password n° **621** by pressing the digital switch and press "**ENTER**" to confirm.
7) Press "**ENTER**" and 01 will lighten;
8) Insert 1 and 0 by pressing the digital switch;
9) Press "**ENTER**" and the writing **"WAIT"** will appear;
10) When PROGRAM COPY will be visualized again, press twice "**ESCAPE**" and you will return on **STANDBY**. The copy has been made.

***NOTE**: You can copy any program.*

5.6.11 Permanent VARIATION TEMPERATURE, TURNS

The under menu Temperature and Turns variation permits to facilitate the permanent modification of some temperature values and central motor turns without directly modifying the STEP of an already existing program.

The temperature values which can be modified are:
- **AIR INLET in the drum;**
- **AIR OUTLET in the drum;**
- **SOLVENT COOLING.**

The speed values which can be modified are:
- **Main motor turns during the washing phase;**
- **Main motor turns during the drying phase.**

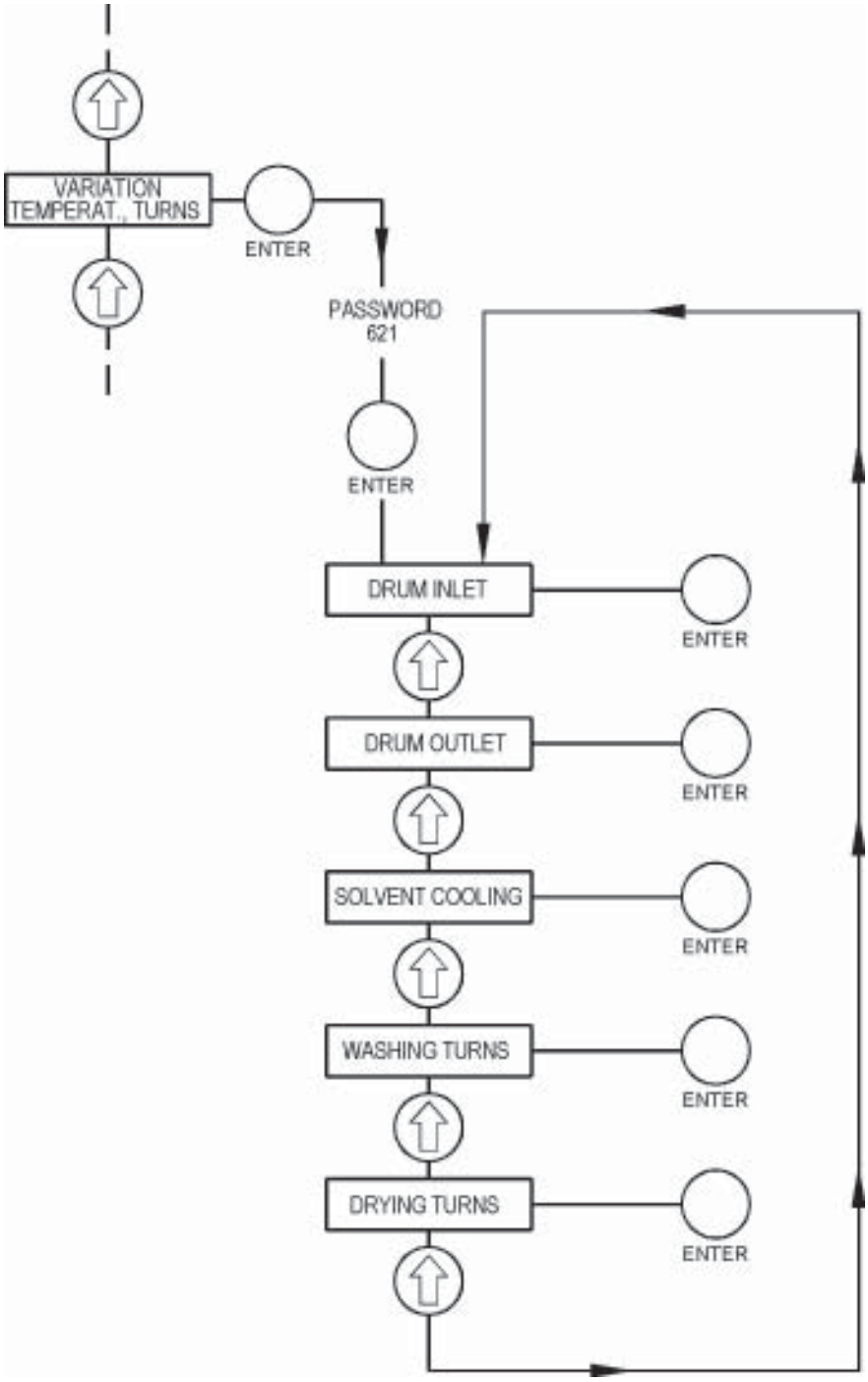
For using the Variation Temperature, Turns menu, proceed in the following way:

1) Select the program number to modify (see **PROGRAM SELECTION**);
2) The computer must be on **STANDBY**;
3) Press the switch ↗ to visualize **PROGRAMMING**;
4) Press "**ENTER**" to visualize **PROGRAM CONTROL**;
5) With the switch ↗ run over the menu up to **VARIATION TEMPERAT., TURNS**;
6) Press "**ENTER**";
7) Give the password n° **621** by pressing the digital switch;
8) Press "**ENTER**" to visualize the first parameter, **"DRUM INLET"**, it is then possible to access the subsequent parameters by pressing ↙ ↗.
9) Select a parameter using "**ENTER**";
10) Insert the new value through the numerical keyboard and press **"ENTER"** to confirm;
11) Finished all setting operations of the different parameters, press button **"ESCAPE"** for going out from the menu and return under **STANDBY** mode.

NOTE: The modifications carried out have effect only on the program which is currently visualized on the display of the computer.

NOTE: The modifications carried out in the program will be maintained till following modification.

MENU' VARIATION TEMPERATURE, TURNS CONFIGURATION:



5.6.12 SELECTING AND DOSING ADDITIVES

Selecting the dosing of additives is only possible by way of the ***54*** push button on **ADDITIONAL CONTROL PANEL**.

You can program the addition of two additives:

Additive **1** – button and Additive **2 -** button .

For example: To choose a number of doses of the additive **1** button proceed as follows.

1) The computer must be on **STANDBY.**

2) Choose the program number (01) (See **CHOOSE PROGRAM**);

3) Press the switch ↗ to visualize **PROGRAMMING**.

4) Push "**ENTER**" to visualize the **PROGRAM CONTROL**;

5) With the ↗ key, scroll down to **NEW PROGRAM** on the menu;

6) Push the "**ENTER**" key ;

7) insert the password n° **621** on the numeric keypad;

8) Push the "**ENTER**" key to visualize the first STEP of the blinking program;

9) (Priming pump)
Push the function keys n° 1-12-22-28. Confirm with the "**ENTER**" key.
The time will be blinking.

10) Digit 2 and 0 on the numeric keypad and confirm with the "**ENTER**" key. The seconds will be blinking.

11) Push the "**ENTER**" key to confirm the seconds and the 2nd STEP will blink;

12) (Reaching the solvent level in the drum by way of the first holding reservoir)
Clear all inserted keys and press the function keys n° 1-12-15-28, confirm with the "**ENTER**" key.
The time will blink.

13) Push 4 and 0 on the numeric keypad and confirm with the "**ENTER**" key. The seconds will blink.

14) Press the "**ENTER**" key to confirm and the 3rd STEP will blink;

15) (Circulation of the solvents by way of the drum with dosage of the additive 1 **)**

Clear all inserted keys and press the function keys n° 1-15-17-21-28.

16) **(Circulation of the solvents by way of the drum with dosage of the additive 1 button** **)**

Clear all inserted keys and press the function keys n° 1-15-17-21-28.

17) Press button ***54*** on the **ADDITIONAL CONTROL PANEL** and **ADDITIVE 1- 00** will appear on the display. Then push, for example, 2 on the numeric keypad.

This means that additive 1 will add 2 doses of the quantity which had been previously regulated on the dosing pump.

NOTE: it is possible to insert a value of maximum 9 dosings per additive.

18) To confirm this value press the "**ENTER**" key, that way you will return to the beginning of the step.

19) Push the "**ENTER**" key and the time will blink.

20) Digit 3 on the numeric keypad and confirm with the "**ENTER**" key and the seconds will blink.

21) Press ↗ to insert the minutes and confirm with "**ENTER**". Then STEP N°4 will blink.

NOTE: This is only the part of a program which illustrates how to program additives.
In this example we only programmed additive 1.
We naturally use the same steps to program additive 2.

NOTA: For the ON-OFF dosing time of the 2 additives (see TIME TABLE P).

***NOTE If the duration of the dosing numbers inserted in one STEP of a program is higher than the duration of the STEP itself, the additive injection will continue also in the* following STEP till the end of the setted dosing quantity.**

5.6.13 PROGRAM ENLARGEMENT

The PROGRAM ENLARGEMENT function allows you to lengthen any STEP of a program in action.
This function can be activated only by using the ***55*** button on the **ADDITIONAL CONTROL PANEL**.

To utilize the PROGRAM ENLARGEMENT proceed as follows:

1) During the execution of any program, pressing the ***55*** button on the **ADDITIONAL CONTROL PANEL** will cause the words **PAUSE MINUTES 00** to appear on the computer display.

2) Inserting, for example, 3 on the numeric keypad and confirming with the "**ENTER**" key, we have lengthened that STEP by 3 minutes.

The enlargement function can be used in any STEP of a program.

NOTE: The values inserted to enlargement a program are automatically lost in the next STEP.

5.6.14 TIMER

Allows you to set a temporary different wash time to the memorized program or set a timer for manual washing functions.

This function is activated by pushing ***56*** button on **ADDITIONAL CONTROL PANEL**. For use this function proceed like follow:

1) During programming or modify of the program make able ***56*** button correspondent to the step in wich there is the washing. EXAMPLE: 1 - 15 - 16 - 21 - 28 - 7 - ***56***

2) With the enabled function will be permitt use timer by pushing ***56*** button before start program,for setting a different washing timeo from the memorized one.

NOTE: This time will be "reset 00:00" automatically at the end of the washing cycle.

5.6.15 WATER PROOFING PIECES COUNTER

The WATER PROOFING PIECES COUNTER function allows you to set the exact number of items you wish to water proof.
Like the preceding functions, this can be activated only by using the **ADDITIONAL CONTROL PANEL**.

To utilize this function, proceed as follows:

NOTE: A water-proofing program must have already been installed on the computer. And a time must have been previously set (for example 029 sec.) in the TIME TABLE, in the SECONDS PER ITEM SPRAY 000 screen.

This means that each set item will be sprayed with the water-proofing mixture for 29 seconds.

1) Before starting the program you must press ***57*** **(WATER PROOFING PIECES COUNTER)** on the **ADDITIONAL CONTROL PANEL**;

2) The words **ITEM 00** will appear on the computer display;

3) Push "**ENTER**" and **00** will blink; on the numeric keypad enter the number of items to be water-proofed and confirm by pushing the "**ENTER**" key;

4) You return to **STANDBY,** pressing the "**ESCAPE**" key.

This way we have inserted the exact number of items to be water-proofed, and therefore it is possible to run the program.

NOTE: The number of items to be water-proofed must be set before starting the program EVERY TIME.

5.7 P. TIMES TABLE DESCRIPTION

1) Times P (Programmable) are planned by the manufacturing industry. These variable times permit to satisfy all the different exigencies concerning the washing programs.

2) | Gentle Wash Time 004 |

Drum clockwise rotation during the gentle wash,

controlled by the function switch

Adjustable from 1 to 255 seconds.
Standard regulation: 004 seconds.

3) | Gentle Wash Pause 011 |

Drum pause between the clockwise and counter clockwise rotation during the gentle wash

Controlled by the function switch

Adjustable from 1 to 255 seconds.
Standard regulation: 011 seconds.

4) | Gentle Wash anti-clockwise 004 |

Drum counterclockwise rotation during the gentle wash, controlled by the function switch

Adjustable from 1 to 255 seconds.
Standard regulation: 004 seconds.

5) | Wash clockwise Standard time 011 |

Drum clockwise rotation during the standard

wash, controlled by the function switch

Adjustable from 1 to 255 seconds.
Standard regulation: 011 seconds.

6) | Wash Pause Standard 004 |

Pause between the drum clockwise and counterclockwise rotation during the standard wash, controlled by

the function switch

Adjustable from 1 to 255 seconds.
Standard regulation: 004 seconds.

7) anti-clockwise wash standard 001

Drum counterclockwise rotation during the standard wash.

Controlled by the function switch

Adjustable from 1to 255 seconds.
Standard regulation: 011 seconds.

8) Wash Acceleration 008

Normal speed washing motor rotation before reaching the slow extract speed.

Controlled by the function switches

Adjustable from 1 to 255 seconds.

Standard regulation: 008 seconds.

9) Slow extract speed acceleration 045

Slow extract speed time before reaching the fast extract speed.

Controlled by the function switch

Adjustable from 1 to 255 seconds.
Standard regulation: 045 seconds.

10) Slow extract speed braking 015

It avoids putting the wash into action when you disconnect the function switch

Adjustable from 10 to 255 seconds.
Standard regulation: 015 seconds.

11) Fast extract speed braking 020

It avoids putting the wash into action when you disconnect the function switch

Adjustable from 1to 255 seconds.
Standard regulation: 020 seconds.

12) Loading door opening time 020

It enables the loading door opening after the set out time

Controlled by the switch "**OPEN/LOCK**" which,if pressed, lightens and opens the loading door lock after the set out time.

Adjustable from 1 to 255 seconds.
Standard regulation: 020 seconds.

13) Immediate loading door opening YES

It enables the immediate loading door opening.

Controlled by the switch "**OPEN/LOCK**"; it can be put into action with YES and disconnected with NO.
Standard regulation: YES.

14) Buzzer time 005

It puts the end cycle ringing into action for a pre-arranged time.

Automatically controlled by the cycle end.

Standard regulation: 005.

15) Pump Delay 000

Allows you to activate the solvent pump late during each automatic cycle.

Standard Setting: 000 seconds.

16) Pre-Sep Discharge 015

Allows you to set the time necessary to drain the contents of either the SEP-DRY or the SEP-DISTILLER.

Standard Setting: 15 seconds.

17) Condenser Drain 15

Allows you to set the time necessary to drain the contents into the Pre-Separator.

Standard Setting: 15 seconds.

18) Seconds per Garm. Spray 000

Note: Used only with **ADDITIONAL CONTROL PANEL.** Allows you to set the spray time necessary for each article of clothing, using the spray pump.
Standard Setting: 000 seconds.

19) Button Trap
Time ON 000

Allows you to activate the self-cleaning button trap brush when the push button is present.

Standard Setting: 000 seconds.
Advised Setting with the self-cleaning buttotrap: 003 seconds.

20) Button Trap
Time OFF 000

Allows you to deactivate the self-cleaning button trap brush for the time set, when the push button is present.

Standard Setting: 000 seconds.
Advised Setting with the self-cleaning buttontrap: 003 seconds.

21) Additive 1
ON 000

Note: Used only with **ADDITIONAL CONTROL PANEL.**

Regulates the ON relay time of the push button

(additive 1) of the computer.
Setting from 000 to 099 seconds.
Standard Setting: 000 seconds.

22) Additive 1
OFF 000

Note: Used only with **ADDITIONAL CONTROL PANEL.**

Regulates the OFF relay time of the push button

(additive 1) of the computer.
Setting from 000 to 099 seconds.
Standard Setting: 000 seconds.

23) Additive 2
ON 000

Note: Used only with **ADDITIONAL CONTROL PANEL.**

Regulates the ON relay time of the push button

(additive 1) of the computer.
Setting from 000 to 099 seconds.
Standard Setting: 000 seconds.

24) Additive 2
OFF 000

Note: Used only with **ADDITIONAL CONTROL PANEL.**

Regulates the OFF relay time of the push button

(additive1) of the computer.
Setting from 000 to 099 seconds.
Standard Setting: 000 seconds

5.7.1 HOW TO MODIFY THE P. TIMES TABLE VALUES

For example, if you want to modify the standard wash times, proceed in the following way:

1) The computer must be on **STANDBY**;
2) Press the switch ↗ to visualize **PROGRAMMING**;
3) Press "**ENTER**" to visualize **PROGRAM CONTROL**;
4) With the switch ↗ reach the **P. TIMES TABLE**.
5) Press "**ENTER**" and give the password n°**621** by pressing the digital switch.
6) Press "**ENTER**" to visualize **GENTLE WASH TIME**.
7) With the switch ↗ raech **STANDARD WASH TIME**.
8) Press "**ENTER**" and the pre-arranged value will lighten.
9) Insert the new value with the digital switch.
10) Press "**ENTER**" and the value will be memorized.
11) Press the switch ↗ to visualize **STANDARD WASH PAUSE**.
12) Press "**ENTER**" and the pre-arranged value will lighten.
13) Insert the new value with the digital switch.
14) Press "**ENTER**" and the value will be memorized.
15) Press the switch ↗ to visualize **ANTICLOCKWISE STANDARD WASH**.
16) Press "**ENTER**" and the pre-arranged value will lighten.
17) Insert the new value with the digital switch.
18) Press "**ENTER**" and the value will be memorized.
19) To quit the programming press twice "**ESCAPE**".

***NOTE**: All the values of the P. TIMES TABLE can be modified, according to the different exigencies, by following the same procedure.*

5.8 MEMORY CARD AND ITS USE

The Memory Card is an useful accessory, which enables to memorize, save and transfer either programs or the regulations inside the computer. The data transfer of the Memory Card can be made between two computers or between a computer and a PC equipped with the proper interface.

The Memory Card is contained in a very little key-shaped case. It must be inserted with the machine off in the connector, on the back of the computer. The insertion can be made in both side.

Moreover, you can insert new programs,previously inserted in the memory card: in this way you avoid wasting time in programming.

5.8.1 PROGRAMS TRANSFER FROM MEMORY CARD TO COMPUTER

To transfer programs from the Memory Card to the computer, proceed in the following way:

1) Switch off the machine through the general switch;

2) Insert the Memory Card into the proper connector marked **"CON8 Memory Card",** which is on the computer back.

3) Switch on the machine by pressing the general switch.

4) The computer must be on **STANDBY**.

5) Press the switch ↗ to visualize **PROGRAMMING**.

6) Press "**ENTER**" to visualize **PROGRAM CONTROL**.

7) Press ↗ and run over the menu till you reach **MEMORY CARD**.

8) Press "**ENTER**" to visualize **MEMORY CARD PASSWORD**.

9) Give the password n°**5283** by pressing the digital switch.
Confirm with "**ENTER**".

10) Press ↗ and run over the menu till you reach **COPY FROM CARD TO COMPUTER.**

11) Press "**ENTER**" and **NO** will lighten;

12) Press ↗ to visualize **YES** and press "**ENTER**";

13) Wait that the writing **COPY FROM CARD TO COMPUTER** is visualized again.
It means that the programs have been sent successfully.

14) Press "**ESCAPE**" to return on **STANDBY**.

15) Switch off the machine through the general switch.

16) Remove the Memory Card from the computer.

17) Switch on the machine through the gereral switch.

NOTE: With this operation we have transferred all the programs inside the Memory Card into the computer.

5.8.2 MEMORY CARD DELETION

To cancel a Memory Card, proceed as follows:

1) Switch off the machine.

2) Insert the Memory Card into the proper connector marked **"CON8 Memory Card"**

3) Switch on the machine thruogh the general switch.

4) The computer must be on **STANDBY**.

5) Press the switch ↗ to visualize **PROGRAMMING**.

6) Press "**ENTER**" to visualize **PROGRAM CONTROL**.

7) Press ↗ and run over the menu till you reach **MEMORY CARD**.

8) Press "**ENTER**" to visualize **MEMORY CARD PASSWORD**.

9) Give the password n° **5283** by pressing the digital switch.
Confirm with "**ENTER**".

10) Press ↗ and run over the menu till you reach **MEMORY CARD DELETE.**

11) Press "**ENTER**" and **NO** will lighten;

12) Press ↗ to visualize **YES** and press "**ENTER**";

13) Wait that the writing **MEMORY CARD DELETE** is visualized again.
It means that the programs has been cancelled.

14) Press "**ESCAPE**" to return on **STANDBY**.

15) Switch off the machine.

16) Remove the Memory Card from the computer.

17) Switch on the machine through the general switch.

***NOTE**: With this opration we have completely cancelled the Memory Card, which now is ready again to be written upon.*

5.8.3 PROGRAMS TRANSFER FROM COMPUTER TO THE MEMORY CARD

To transfer programs from computer to the Memory Card, proceed as follows:

1) Switch off the machine.
2) Insert the Memory Card into the proper connector marked **"CON8 Memory Card"**
3) Switch on the machine turough the general switch.
4) The computer must be on **STANDBY**.
5) Press the switch ↗ to visualize **PROGRAMMING**.
6) Press "**ENTER**" to visualize **PROGRAM CONTROL**.
7) Press ↗ and run over the menu till **MEMORY CARD**.
8) Press "**ENTER**" to visualize **MEMORY CARD PASSWORD**.
9) Give the password n° **5283** by pressing the digital switch. Confirm with "**ENTER**".
10) Press ↗ and run over the menu till you reach **COPY FROM COMPUTER TO CARD.**
11) Press "**ENTER**" and **NO** will lighten;
12) Press ↗ to visualize **YES** and press "**ENTER**";
13) Wait that the writing **COPY FROM COMPUTER TO CARD** is visualized again. It means that the programs have been sent successfully.
14) Press "**ESCAPE**" to return on **STANDBY**.
15) Switch off the machine.
16) Remove the Memory Card from the computer.
17) Switch on the computer through the general switch.

IMPORTANT: IT IS NECESSARY TO EXECUTE THE MEMORY CARD DELETION PROCEDURE BEFORE TRANSFERRING PROGRAMS FROM THE COMPUTER TO THE MEMORY CARD ITSELF.

***NOTE**: With this operation we have tranferred all the programs inside the computer into the Memory Card.*

5.9 MAINTENANCE CONTROL

The maintenance control is aimed at controlling and not to modify the pre-arranged values in the maintenance service, that is to say all the values of the programmed maintenances.

To have access to **MAINTENANCE CONTROL,** proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **MAINTENANCE CONTROL**;

4) Press "**ENTER**" to visualize **LOAD COUNTER ZERO SETTING**;

5) With the switch ↗ you can verify all the times pre-arranged in the menu **MAINTENANCE SERVICE**.

6) To quit the control, press "**ESCAPE**" to return on **STANDBY**.

5.10 MAINTENANCE SERVICE

The service enables to set up the values for all the programmed maintenances. These values are aimed at informing the user about the proper moment to excute certain maintenance operations. The information are given at the end of each cycle, either visually and acoustically.

5.10.1 LOAD COUNTER RESET

It allow to zero set the load counter visualized on the low-left side of the display.
To reset the load counter proceed as follows:

1) The computer must be on **STANDBY**;
2) Press ↗ to visualize **PROGRAMMING**;
3) With the switch ↗ run over the menu till **SERVICE**;
4) Press "**ENTER**";
5) Give the password n°**4932** by pressing the digital switch;
6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;
7) Press "**ENTER**" and **NO** will lighten;
8) Press ↗ to visualize **YES** and press "**ENTER**";
9) Press "**ESCAPE**" to return on **STANDBY**.

*NOTE: After this operation, the setting of this menu sets automatically **NO**.*

5.10.2 AIR FILTER 1 CLEANING

The air filter 1 cleaning is aimed at informing the user about the moment to clean the first air filter. Standard regulation: 0000.
To arrange a value, for example 0003, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **MAINTENANCE SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **AIR FILTER 1 CLEANING**;

7) Press "**ENTER**" and the number will lighten;

8) Insert number 3 by pressing the digital switch;

9) Press "**ENTER**" to memorize;

10) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once cleaned the filter, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.3 AIR FILTER 2 CLEANING

The air filter 2 cleaning is aimed at informing the user about the moment to clean the second air filter.
Standard regulation: 0000.
To arrange a value, for example 0005, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **AIR FILTER 2 CLEANING**;

7) Press "**ENTER**" and the number will lighten;

8) Insert number 5 by pressing the digital switch;

9) Press "**ENTER**" to memorize;

10) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once cleaned the filter, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.4 BUTTON TRAP FILTER CLEANING

The button trap filter cleaning is aimed at informing the user that it's time to clean the button trap filter.
Standard regulation: 0000.
To arrange a value, for example 0003, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **MAINTENANCE SERVICE;**

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **BUTTON TRAP FILTER CLEANING**;

8) Press "**ENTER**" and the number will lighten;

9) Insert number 3 by pressing the digital switch;

10) Press "**ENTER**" to memorize;

11) Press "**ESCAPE**" to return on **STANDBY**.

*NOTE: To able again the functioning of the machine, once cleaned the filter, press and hold the key "**ESCAPE**" for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.5 1° FILTER CLEANING

The 1° filter cleaning is aimed at approximately informing the user it's time to execute the program concerning the 1° filter cleaning. Standard regualtion: 000. To arrange a value, for example 030, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switc h ↗ run over the menu till **MAINTENANCE SERVICE;**

4) Press "**ENTER**" ;

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear**;**

7) With the switch ↗ run over the menu till **1° FILTER CLEANING**;

8) Press "**ENTER**" and the number will lighten;

9) Insert number 3 and 0 by pressing the digital switch ;

10) Press "**ENTER**" to memorize;

11) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once cleaned the filter, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.6 2° FILTER CLEANING

The 2° filter cleaning is aimed at approximately informing the user it's time to execute the program concerning the 2° filter cleaning. This program is already inserted inside the compter and must be selected when the machine needs the the 2° filter cleaning, only in those machines equipped with the 2° filter.
Standard regulation: 000.
To arrange a value, for example 030, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **MAINTENANCE SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch ;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **2° FILTER CLEANING**;

8) Press "**ENTER**" and the number will lighten;

9) Insert number 3 and 0 by pressing the digital switch;

10) Press "**ENTER**" to memorize;

11) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once cleaned the filter, press and hold the key

"**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.7 3° FILTER CLEANING

The 3° filter cleaning is aimed at approximately informing the user about the moment to execute the program concerning the 3° filter cleaning. It is normally a cartridge filter; therefore its cleaning means the cartridges replacement. For this operation, see the instruction manual.
Standard regulation: 000.
To arrange a value, for example 200, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **MAINTENANCE SERVICE**;

4) Press "**ENTER**".

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" to visualize **LOAD COUNTER RESET;**

7) With the switch ↗ run over the menu till **3° FILTER CLEANING**;

8) Press "**ENTER**" and the number will lighten;

9) Insert number 200 by pressing the digital switch;

10) Press "**ENTER**" to memorize;

11) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once cleaned the filter, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.8 4° FILTER CLEANING

The 4°filter cleaning is aimed at approximately informing the user about the moment to execute the program concerning the 4° filter. It is normally a cartridge filter, therefore its cleaning means the cartridges replacement. For this operation see the instruction manual. Standard regulation:000.
To arrange a value, for example 200, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **MAINTENANCE SERVICE**;

4) Press "**ENTER**".

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **4° FILTER CLEANING**;

8) Press "**ENTER**" and the number will lighten;

9) Insert number 200 by pressing the digital switch;

10) Press "**ENTER**" to memorize;

11) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once cleaned the filter, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.9 STILL RESIDUES CLEANING

The still residues cleaning is aimed at approximately informing the user about the moment to execute the still residues drainage. For this operation see the instruction manual.
Standard regulation: 000.
To arrange a value, for example 30, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **MAINTENANCE SERVICE**;

4) Press "**ENTER**".

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" to visualize **AIR FILTER CLEANING;**

7) With the switch ↗ run over the menu till **STILL OILS CLEANING**;

8) Press "**ENTER**" and the number will lighten;

9) Insert number 30 by pressing the digital switch;

10) Press "**ENTER**" to memorize;

11) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once the residues are expelled, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.10 STILL CLEANING

The still cleaning is aimed at approximately informing the user about the moment to execute the still total cleaning. For this operation, see the instruction manual.
Standard regulation: 000.
To arrange a value, for example 50, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **MAINTENANCE SERVICE;**

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" to visualize **LOAD COUNTER RESET;**

7) With the switch ↗ run over the menu till **STILL FILTER CLEANING;**

8) Press "**ENTER**" and the number will lighten;

9) Insert number 50 by pressing the digital switch;

10) Press "**ENTER**" to memorize;

11) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once still cleaning, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.11 SEPARATOR CLEANING

The separator cleaning is aimed at approximately informing the user about the moment to execute the separator cleaning. For this operation, see the instruction manual.
Standard regulation: 000.
To arrange a value, for example 50, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" to visualize **LOAD COUNTER RESET**;

7) With the switch ↗ run over the menu till **SEPARATOR CLEANING;**

8) Press "**ENTER**" and the number will lighten;

9) Insert number 50 by pressing the digital switch;

10) Press "**ENTER**" to memorize;

11) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once separator cleaning, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.12 WATER FILTER CLEANING

The water filter cleaning is aimed at informing the user about the moment to clean the water filter. Standard regulation: 0000.
To arrange a value, for example 0200, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **WATER FILTER CLEANING**;

7) Press "**ENTER**" and the number will lighten;

8) Insert number 200 by pressing the digital switch;

9) Press "**ENTER**" to memorize;

10) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once cleaned the filter, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.13 LUBRICATOR OIL CONTROL

The lubricator oil control is aimed at informing the user about the moment to control the oil level of the air compressed lubricator. Standard regulation: 0000.
To arrange a value, for example 0200, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **LUBRICATOR OIL CONTROL**;

7) Press "**ENTER**" and the number will lighten;

8) Insert number 200 by pressing the digital switch;

9) Press "**ENTER**" to memorize;

10) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once controlled the oil level, press and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.14 VACUUM PUMP FILTER CLEANING

The vacuum pump filter cleaning is aimed at informing the user about the moment to clean the vacuum pump filter. Standard regulation: 0000.
To arrange a value, for example 0100, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **VACUUM PUMP FILTER CLEANING**;

7) Press "**ENTER**" and the number will lighten;

8) Insert number 100 by pressing the digital switch;

9) Press "**ENTER**" to memorize;

10) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: To able again the functioning of the machine, once cleaned the filter, pre1ss and hold the key "**ESCAPE**" *for two or three second, till the write will disappear and the buzzer sounds twice.*

5.10.15 ANTICREASE

The anticrease allow, at the end of the working cycle, to avoid that the garments stay too long in the drum stopped.
Standard regulation: NO
To activate this function proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **ANTICREASE**;

8) Press "**ENTER**" and **NO** will lighten;

9) With the switch ↗ set **YES** and press "**ENTER**" to memorize;

10) Press "**ESCAPE**" to return on **STANDBY**.

5.10.16 EMERGENCY TANK

The emergency tank menu is used to avoid sending solvent to the still when the latter is already full.

Standard regulation: **0**
To activate this function proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**4932** by pressing the digital switch;

6) Press "**ENTER**" and **LOAD COUNTER RESET** will appear;

7) With the switch ↗ run over the menu till **EMERGENCY TANK**;

8) Press "**ENTER**" and **0** will start to flash;

9) Using this button ↗ select the setting required ("0" - "1" - "2" - "3") and press "**ENTER**" to confirm;

10) Press "**ESCAPE**" to go back to **STANDBY** mode.

When the still is full, you will have the following situations with the various settings while a program is being executed:

Setting "**0**" = the computer blocks all the functions, with the exception of button "20" and the display shows "ALARM A5 STILL FULL".

Setting "**1**" = when button "25" is activated, the delivery valve of the still remains closed and the delivery valve of tank 1 opens (button "22").

Setting "**2**" = when button "25" is activated, the delivery valve of the still remains closed and the delivery valve of tank 2 opens (button "23").

Setting "**3**" = when button "25" is activated, the delivery valve of the still remains closed and the delivery valve of tank 3 opens (button "24").

NOTE: If you select setting "1" or "2" or "3", if the still is full, button "25" will flash until the loading door is physically opened at the end of the program.
If the still is still full at the end of the program (the solvent level is higher than the Maximum level float) the display will show "ALARM A5 STILL FULL".
This method enables you to end the program without leaving the garments soaking for hours in the solvent in the basket.

NOTE: If you select setting "1" or "2" or "3", when "ALARM A5 STILL FULL" triggers, the computer also blocks buttons "31" and "32" (outputs 38 and 39). This is necessary because alarm "A5" is used also to point out when the sludge bins are full. If the sludge extraction program is running (or the pneumostill program is running for machines that use hydrocarbons) and alarm A5 triggers, buttons "31" and "32" (if enabled) will flash.

NOTE: Button "25" does not activate any function if it is enabled in the first step to check if button "20" switches on. This is done to avoid an accumulation of solvent in the still (or to prevent breaking the vacuum in hydrocarbon machines).

5.11 SPECIAL SERVICE

5.11.1 LANGUAGE SELECTION

Computer has in its memory 5 languages: Italian, English, German; French and Spanish plus the CARD function *(see paragraph 5.11.2 USE OF THE CARD "EXTRA LANGUAGES");*

To select English, for example, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SPECIAL SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**2079** by pressing the digital switch;

6) Press "**ENTER**" to visualize **ITALIAN LANGUAGE**;

7) Press "**ENTER**" to visualize **ITALIAN**;

8) With the switch ↗ run over the menu till **ENGLISH;**

9) Press "**ENTER**" to memorize;

10) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: *In this way computer will visualize all the messages in the selected language. All the languages which are not memorized in the computer, will be considered as special requests.*

5.11.2 USE OF THE CARD "EXTRA LANGUAGES"

The computer, besides the languages which are memorized (*see 5.11.1 LANGUAGE SELECTION*) can utilize the dictionary referring to other languages, acting as follows:

• Preliminary operation:
With switched off computer insert card "EXTRA LANGUAGES " in the appropriate computer connector.

• With switched on computer:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SPECIAL SERVICE**;

4) Press "**ENTER**";

5) Give the password n°**2079** by pressing the digital switch;

6) Press "**ENTER**" to visualize **ITALIAN LANGUAGE**;

7) Press "**ENTER**" to visualize **ITALIAN**;

8) With the switch ↗ run over the menu till **CARD;**

9) Press "**ENTER**" to memorize;

10) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: THE CARD " EXTRA LANGUAGE " HAS TO REMAIN PERMANENTLY INSERTED.

NOTE: IF YOU SELECT THE CARD AND THE CARD " EXTRA LANGUAGE " IS NOT INSERTED IN THE APPROPRIATE CONNECTOR , FOR DEFAULT THE COMPUTER WILL USE THE ENGLISH LANGUAGE.

NOTE: THE USE OF THE EXTERNAL CARD " EXTRA LANGUAGE " IT IS POSSIBLE ONLY IF ON THE COMPUTER IS INSTALLED AN UPDATED VERSION OF THE SOFTWARE : IT HAS TO BE PRESENT AT LEAST VERSION 5.09.

NOTE: IN CASE YOU SHOULD COPY OR UNLOAD NEW PROGRAMS REMOVE MOMENTANEOUSLY THE CARD "EXTRA LANGUAGE" FROM TNE CON NECTOR OF THE COMPUTER AND AT THE END OF THE OPERATION INSERT IT AGAIN.

5.11.3 NEGATIVE DISPLAY

Computer has a LCD display, graphic type, with two colors tones: positive (light writings, dark backgroung) or negative (dark writings and light background).
To select the negative display, proceed as follows:

1) The computer must be on **STANDBY**;

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SPECIAL SERVICE;**

4) Press "**ENTER**";

5) Give the password n°**2079** by pressing the digital switch;

6) Press "**ENTER**" to visualize **ITALIAN LANGUAGE**;

7) With the switch ↗ run over the menu till **NEGATIVE DISPLAY**;

8) Press "**ENTER**" and NO will lighten;

9) With the switch ↗ run over till YES;

10) Press "**ENTER**" to confirm;

11) Press "**ESCAPE**" to return on **STANDBY**.

NOTE: *In this way the dispaly will have the negative mode, that is dark writings on a light background.*

5.11.4 DISPLAY CONTRAST ADJUSTMENT

To regulate the display contrast the computer must be in STANDBY.

1) Press consequently buttons ***8 8 9 9*** .

2) Within 5 seconds adjust the contrast with buttons

and

.

3) Once the computer has been adjusted, the same will return in STANDBY position automatically.

5.11.5 PERIPHERAL UNITS

The peripheral units are complementary accessories which can be added to computer and which are controlled by the central memory.

The accessories at disposal at the moment are:

1) **ADDITIONAL KEYBOARD**
   Is a keypad with 14 function keys, 6 of which have automatic/manual functions (and therefore can be programmed) and 8 that only function manually (they cannot be programmed).

2) **ADDITIONAL CONTROL PANEL**
   The following operations are possible using the **ADDITIONAL CONTROL PANEL**:

   A) Control and manage up to 16 temperatures, 5 of which can be programmed;

   B) Control and manage each STEP of a program's speed, differing for each basket, to meet the innumerable needs of each load;

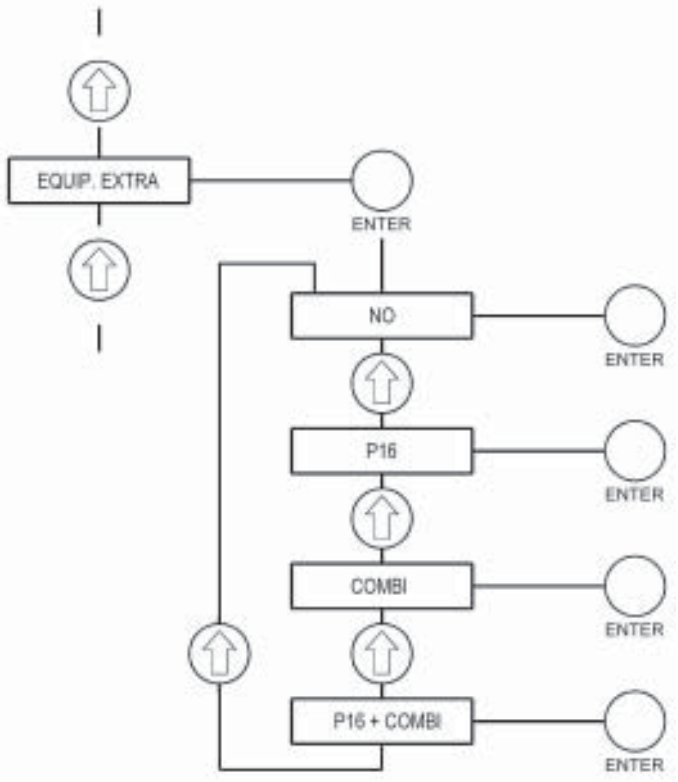
   C) Lengthen any STEP of a program in automatic mode;

   D) Set the number of articles of clothing to be water-proofed;

   E) Select the number of doses of the additives;

   F) Pause the computer while waiting for the machine to reach one of the 5 programmable temperatures.

MENU' PERIPHERAL UNITS CONFIGURATION:



No Peripherals Set

ADDITIONAL KEYBOARD Peripheral Set

ADDITIONAL CONTROL PANEL Peripheral Set

ADDITIONAL KEYBOARD Peripheral+ADDITIONAL CONTROL PANEL Peripheral Set

5.11.6 KIMONO

It is aimed to wash clothes like kimono or silk clothes. For this reason the drum movement is not a rotary one but an oscillatory one.

To arrange the oscillation time, proceed as follows:

1) The computer must be on **STANDBY;**
2) Press ↗ to visualize **PROGRAMMING**;
3) With the switch ↗ run over the menu till **SPECIAL SERVICE**;
4) Press "**ENTER**" ;
5) Give the password n°**2079** by pressing the digital switch;
6) Press "**ENTER**" and **ITALIAN LANGUAGE** will appear;
7) With the switch ↗ run over the menu till **KIMONO**;
8) Press "**ENTER**" and the value expressed in tenth/second will lighten,

   which corresponds to the drum oscillation time. For example, 05 corresponds to 5 tenth/second.
9) Insert the value by pressing the digital switch;
10) Press "**ENTER**" to confirm;
11) Press twice "**ESCAPE**" to return on **STANDBY**;

NOTE: *To activate the KIMONO function, in manual mode or automatic mode, press at the same time the keys* *and* *.*

If the time is set at 00, the function is disabled.

If the time is set at 99, the function will be one way only.

5.11.7 MANUAL OPERATIONS ENABLE

It ables the manual functioning of the switches. This operation can be made in the following way:

1) The computer must be on **STANDBY;**
2) Press ↗ to visualize **PROGRAMMING**;
3) With the switch ↗ run over the menu till **SPECIAL SERVICE**;
4) Press "**ENTER**";
5) Give the password n°**2079** by pressing the digital switch;
6) Press "**ENTER**" and **ITALIAN LANGUAGE** will appear;
7) With the switch ↗ run over the menu till **MANUAL ENABLED**;
8) Press "**ENTER**" and **MANUAL ENABLED NO** will lighten**;**
9) With the switch ↗ run over the menu till **MANUAL ENABLED YES**;
10) Press "**ENTER**" to confirm;
11) Press "**ESCAPE**" to return on **STANDBY**;

5.11.8 10 PAUSE UNISPRAY

It is used to choose whether to use button “27”.
By setting “YES”, button “27” will activate the external pause and the rotation of the basket (with spray system).
By setting “NO”, button “27” will work just like any other button without activating the external pause and rotation of the basket.

Standard regulation: YES

Proceed as follows to change value 10 Unispray pause:

1) The computer must be on **STANDBY;**

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SPECIAL SERVICE**;

4) Press “**ENTER**” ;

5) Give the password n° **2079** by pressing the digital switch;

6) Press “**ENTER**” and **ITALIAN LANGUAGE** will appear;

7) With the switch ↗ run over the menu till **10 PAUSE UNISPRAY**;

8) Press “**ENTER**” and **YES** will lighten;

9) With the switch ↗ set **NO** and press “**ENTER**” to memorize;

10) Press “**ESCAPE**” to return on **STANDBY**;

5.11.9 LOADS COUNTER

The value of the LOADS COUNTER indicates the total number of washings carried out from the machine starting from its installation.

To arrange the LOADS COUNTER value, proceed as follows:

1) The computer must be on **STANDBY;**

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SPECIAL SERVICE**;

4) Press "**ENTER**" ;

5) Give the password n° **2079** by pressing the digital switch;

6) Press "**ENTER**" and **ITALIAN LANGUAGE** will appear;

7) With the switch ↗ run over the menu till **LOADS COUNTER**;

8) Press "**ENTER**" and the value will lighten.

9) Insert the new value by pressing the digital switch;

10) Press "**ENTER**" to confirm;

11) Press "**ESCAPE**" to return on **STANDBY**;

NOTE: *Such modification has to be carried out only from an authorized technician from the distributor or manufacturer.*

5.11.10 KG

It is used to activate the counter of kilos washed by the machine.

Standard regulation: **NO**
Proceed as follows to activate the KG counter:

1) The computer must be on **STANDBY;**

2) Press ↗ to visualize **PROGRAMMING**;

3) With the switch ↗ run over the menu till **SPECIAL SERVICE**;

4) Press "**ENTER**" ;

5) Give the password n° **2079** by pressing the digital switch;

6) Press "**ENTER**" and **ITALIAN LANGUAGE** will appear;

7) With the switch ↗ run over the menu till **KG**;

8) Press "**ENTER**" and **NO** will lighten;

9) With the switch ↗ set **YES** and press "**ENTER**" to memorize;

10) Press "**ESCAPE**" to return on **STANDBY**;

Proceed as follows to enter the number of kilos:
(All this is done before starting a wash program)

1) The computer must in **STANDBY** mode.

2) Press "**ENTER**".
A window appears in which you can read the total number of kilos (those washed up to the current time) and KG appears with a flashing value.

3) Enter the number of kilos to be washed using the numerical keyboard.

4) Press "**ENTER**" to save.

5) Start the required wash program.

NOTE: The program will not start when you press START if you have not set the KILOS, in which case the buzzer will also sound and "KG=0" will appear on the display.

NOTE: At the end of the wash program, if function 11 (wash cycle counter) is set within one of the steps, the number of KILOS set will be added to the total number of KILOS. If the program does not include function 11 in any of the steps, the KILOS entered will not be added to the total count; therefore, for maintenance programs that do not exploit function 11, you can enter the number of KILOS at random because they will not be counted whatever the case.

NOTE: The KILOS set are reset in any event during the last step of the program, whether it is a maintenance program (11 disabled) or not.

NOTE: The total KG counter cannot be reset.

5.12 TEMPERATURE

In the past, the computer could not manage temperatures available on the machine. Today, this control is now possible using a small control panel named **ADDITIONAL CONTROL PANEL**.

With the **ADDITIONAL CONTROL PANEL**, the computer can control and manage up to 16 temperatures, 5 of which are programmable when necessary. You can also create programs allowing different temperatures in each STEP to accommodate different drying needs.

5.12.1 TEMPERATURE DESCRIPTION

1) The temperature values are already set by the manufacturer, but they can be varied within a certain pre-defined range.

2) | Unit of Measure **°C**/*°F* |
Allows you to select the unit of measure in either Fahrenheit *(°F)* or Centigrade **(°C)**.

Standard Setting: **000°C** *(000°F)*.

3) | Drum Inlet Diff. **-01**/*-2* |
Allows you to regulate the temperature difference of set values, which can be set from **-01 to -10°C** *(from -02 to -18°F)*.

Standard Setting: **-01°C** *(-02°F)*.
Attention: diff. 000 means that the probe is disabled.

4) | Drum Inlet Minimum **040**/*104* |
Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **040°C** *(104°F)*.

5) | Drum Inlet Maximum **080**/*176* |
Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **080°C** *(176°F)*.

6) | Drum Inlet Default **075**/*167* |
.
Allows you to insert the normal working temperature.
This value can be varied and programmed at any moment of the operation without changing the menu.

Standard Setting: **075°C** *(167°F)*.

7) | Cooling Drum Diff. **001**/*02* |
Allows you to regulate the temperature difference of set values, which can be set from **001 to 010°C** *(from 02 to 18°F)*.

Standard Setting: **001°C** *(02°F)*.
Attention: diff. 000 means that the probe is disabled.

8) | Cooling Drum Minimum **025**/*77* |
Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **025°C** *(77°F)*.

9) Cooling Drum Maximum **050**/*122*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **050°C** *(122°F)*.

10) Cooling Drum Default **030**/*86*

Allows you to insert the normal working temperature.
This value can be varied and programmed at any moment of the operation without changing the menu.

Standard Setting: **030°C** *(86°F)*.

11) Drum Overheating Diff. **001**/*02*

Allows you to regulate the temperature difference of set values. which can be set from **-001°C to 010°C** *(from -02°F to 18°F)*.

Standard Setting: **001°C** *(02°F)*.
Attention: diff. 000 means that the probe is disabled..

12) Drum Overheating Minimum **090**/*194*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **090°C** *(194°F)*.

13) Drum Overheating Maximum **100**/*212*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **100°C** *(212°F)*.

14) Drum Overheating Set **095**/*203*

Allows you to insert the normal working temperature.
This value can only be changed on the menu.

Standard Setting: **095°C** *(203°F)*.

15) Outlet Drum Diff. **-01**/*-02*

Allows you to regulate the temperature difference of set values. which can be set from **-01 to -10 °C** *(from -02 to -18°F)*.

Standard Setting: **-01°C** *(-02°F)*.
Attention: diff. 000 means that the probe is disabled.

16) Outlet Drum Minimum **040**/*104*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **040°C** *(104°F)*.

17) Outlet Drum Maximum **070**/*158*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **070°C** *(158°F)*.

18) Outlet Drum Default **065**/*149*

Allows you to insert the normal working temperature.
This value can be varied and programmed at any moment of the operation without changing the menu.

Standard Setting: **065°C** *(149°F)*.

19) Cooling Solvent Diff. **001**/*02*

Allows you to regulate the temperature difference of set values. which can be set from **001°C to 010°C** *(from 02 to 18°F)*.

Standard Setting: **001°C** *(02°F)*.
Attention: 000 means that the probe is disabled.

20) Cooling Solvent Minimum **020**/*68*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **020°C** *(68°F)*.

21) Cooling Solvent Maximum **030**/*86*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **030°C** *(86°F)*.

22) Cooling Solvent Default **025**/*77*

Allows you to insert the normal working temperature.
This value can be varied and programmed at any moment of the operation without changing the menu.

Standard Setting: **025°C** *(77°F)*.

23) Solvent Overheating Diff. **001**/*02*

Allows you to regulate the temperature difference of set values. which can be set from **-001°C to 010°C** *(from -02 to 18°F)*.

Standard Setting: **001°C** *(02°F)*.
Attention: 000 means that the probe is disabled.

24) Solvent Overheating Minimum **040**/*104*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **040°C** *(104°F)*.

25) Solvent Overheating Maximum **050**/*122*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **050°C** *(122°F)*.

26) Solvent Overheating Set **050**/*122*

Allows you to insert the normal working temperature.
This value can only be changed on the menu.

Standard Setting: **020°C** *(68°F)*.

27) Cold Air Temperature Diff. **-01**/*-02*

Allows you to regulate the degree difference of set values. which can be set from **-01°C to -10°C** *(from -02 to -18°F)*.

Standard Setting: **-01°C** *(-02°F)*.
Attention: 000 means that the probe is disabled.

28) Cold Air Temperature Minimum **004**/*39,2*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **004°C** *(39,2°F)*.

29) Cold Air Temperature Maximum **008**/*46,4*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **008°C** (*46,4°F*).

30) Cold Air Temperature Set **005**/*41*

Allows you to insert the normal working temperature.
This value can only be changed on the menu.

Standard Setting: **005°C** (*41°F*).

31) Evaporator Overheating Diff. **001**/*02*

Allows you to regulate the temperature difference of set values.
It can be set from **001°C to 010°C** (*from 02 to 18°F*).

Standard Setting: **001°C** (*02°F*).
Attention: 000 means that the probe is disabled.

32) Evaporator Overheating Minimum **030**/*86*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **030°C** (*86°F*).

33) Evaporator Overheating Maximum **050**/*122*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **050°C** (*122°F*).

34) Evaporator Overheating Set **050**/*122*

Allows you to insert the normal working temperature.
This value can only be changed on the menu.

Standard Setting: **050°C** (*122°F*).

35) Water Still Lack Diff. **001**/*02*

Allows you to regulate the temperature difference of set values, which can be set from **001°C to 010°C** (*from 02 to 18°F*).

Standard Setting: **001°C** (*02°F*).
Attention: 000 means that the probe is disabled.

36) Water Still Lack Minimum **035**/*95*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **035°C** (*95°F*).

37) Water Still Lack Maximum **050**/*122*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **050°C** (*122°F*).

38) Water Still Lack Set **050**/*122*

Allows you to insert the normal working temperature.
This value can only be changed on the menu.

Standard Setting: **050°C** (*122°F*).

39) Still Water Control Diff. **001**/*02*

Allows you to regulate the degree difference of set values.
which can be set from **001°C to 010°C** (*from 02 to 18°F*).

Standard Setting: **001°C** (*02°F*).
Attention: 000 means that the probe is disabled.

40) Still Water Control Minimum **000**/*32*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **000°C** (*32°F*).

41) Still Water Control Maximum **030**/*86*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **030°C** (*86°F*).

42) Still Water Control Set **030**/*86*

Allows you to insert the normal working temperature.
This value can only be changed on the menu.

Standard Setting: **030°C** (*86°F*).

43) Still Bottom Diff. **-05**/*-05*

Allows you to regulate the degree difference of set values.
which can be set from **-05°C to -01°C** (*from -05 to -02°F*).

Standard Setting: **-05°C** (*-05°F*).
Attention: 000 means that the probe is disabled.

44) Still Bottom Minimum **110**/*230*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **110°C** (*230°F*).

45) Still Bottom Maximum **149**/*300*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **149°C** (*300°F*).
Attention: This value cannot be exceeded.

46) Still Bottom Set - Set2 **135**/*275* - **148**/*298*

Allows you to insert the normal working temperature.
This value can only be changed on the menu.

Standard Setting SET: **135°C** (*275°F*).
Standard Setting SET 2: **148°C** (*298°F*).

47) Still Opening Diff. **-01**/*-02*

Allows you to regulate the degree difference of set values.
which can be set from **-01°C to -10°C** (*from -02 to -18°F*).

Standard Setting: **-01°C** (*-02°F*).
Attention: 000 means that the probe is disabled.

48) Still Opening Minimum **36**/*96,8*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **036°C** (*96,8°F*).

49) Still Opening Maximum **045**/*113*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **045°C** (*113°F*).

50) Still Opening Set **040**/*104*

Allows you to insert the normal working temperature.

Standard Setting: **040°C** (*104°F*).

51) Vacuum Pump Cooling Diff. **001**/*01*

Allows you to regulate the degree difference of set values which can be set from **001°C to 010°C** (*from -18 to 18°F*).

Standard Setting: **001°C** (*02°F*).
Attention: 000 means that the probe is disabled.

52) Vacuum Pump Cooling Minimum **025**/*77*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **025°C** (*77°F*).

53) Vacuum Pump Cooling Maximum **035**/*95*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **035°C** (*95°F*).
Attention: This value cannot be exceeded.

54) Vacuum Pump Cooling Set **035**/*95*

Allows you to insert the normal working temperature. This value can only be changed on the menu.

Standard Setting: **035°C** (*95°F*).

55) Vacuum Pump Overheating Diff. **001**/*01*

Allows you to regulate the degree difference of set values which can be set from **001°C to 010°C** (*from -18 to 18°F*).

Standard Setting: **001°C** (*01°F*).
Attention: 000 means that the probe is disabled.

56) Vacuum Pump Overheating Minimum **040**/*104*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **040°C** (*104°F*).

57) Vacuum Pump Overheating Maximum **050**/*122*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **050°C** (*122°F*).

58) Vacuum Pump Overheating Set **045**/*113*

Allows you to insert the normal working temperature.

Standard Setting: **045°C** (*113°F*).

59) Solvent Heating Diff. **-01**/*-02*

Allows you to regulate the degree difference of set values which can be set from **-01°C to -10°C** (*from -18 to 18°F*).

Standard Setting: **-01°C** (*-02°F*).
Attention: 000 means that the probe is disabled.

60) Solvent Heating Minimum **025**/*77*

Allows you to insert the minimum value under which it is impossible to set the temperature.

Standard Setting: **025°C** (*77°F*)

61) Solvent Heating Maximum **040**/*104*

Allows you to insert the maximum value over which it is impossible to set the temperature.

Standard Setting: **040°C** (*104°F*).
Attention: This value cannot be exceeded.

62) Solvent Heating Default **040**/*104*

Allows you to insert the normal working temperature. This value can only be changed on the menu.

Standard Setting: **040°C** (*104°F*).

5.12.2 USING PROGRAMMED TEMPERATURES

There are 5 programmable temperatures:

A) **DRUM INLET:** which controls the entrance of air into the drum;

B) **COOLING DRUM:** which controls the temperature of the cooling of garments;

C) **OUTLET DRUM:** which controls the exit temperature of the drum;

D) **COOLING SOLVENT:** which controls the temperature of the solvent while cooling;

E) **SOLVENT HEATING:** which prevents the temperature of the solvent from overheating.

NOTE: *During programming, the pre-defined temperature values are memorized in the same program (default values). To modify these values, you must change them from the MODIFY PROGRAM display.*
To insert a new program with different temperatures, proceed as follows:

Example of a Wash Program with one wash on filter 1 and drying with temperature control (Program 01).

1) The computer must be on **STANDBY**;

2) Select program number 01 (see **SELECT PROGRAM**);

3) Push the ↗ key to visualize **PROGRAMMING**;

4) Push the "**ENTER**" key to visualize **PROGRAM CONTROL**;

5) With the ↗ key scroll down the menu to find **NEW PROGRAM**;

6) Push the "**ENTER**" key;

7) Insert password n° **621** on the numeric keypad;

8) Push the "**ENTER**" key to visualize the first STEP of the program that will be blinking.

9) Use the programming example (see file card N° 1);

10) For example: **(self-drawing pump with cooling solvent)**
Push function keys n° 1-12-22-28-7(7-Artic-Line);

11) Press key n° ***51*** (**TEMPERATURE CONTROL**) until **COOLING SOLVENT** appears on the screen and the temperature value will be flashing;

12) Insert the temperature desired on the numeric keypad (for example 20°C - type 2 and 0);

13) To confirm the new value and exit from the screen push the "**ENTER**" key until you arrive at the beginning of the STEP;

14) **Note:** In this example, we have inserted 20°C as the temperature of the cooling solvent during the pump triggering;

15) Press the "**ENTER**" key and the time will flash;

16) Type 2 and 0 on the numeric keypad and confirm with the "**ENTER**" key. Now the seconds will blink;

17) Press "**ENTER**" to confirm the seconds and the 2nd STEP will flash;

18) **(Reaching the solvent level in the drum of the first holding tank)**
Clear all previously inserted keys. Push the function keys n° 1-12-15-28 and confirm with the "**ENTER**" key, and the time will blink;

19) Type 4 and 0 on the numeric keypad and confirm with the "**ENTER**" key, causing the seconds to blink;

20) Press "**ENTER**" to confirm and go to the 3rd STEP;

21) **(Solvent circulation through filter 1 with the drum and the cooling solvent)**

Clear all previously inserted keys. Push the function keys n° 1-15-16-21-28-7(7-Articline);

22) Push the ***51*** button (**TEMPERATURE CONTROL**) until **COOLING SOLVENT** appears on the screen, and the temperature value will blink;

23) Type the desired temperature on the numeric keypad (for example for 21°C - type 2 and 1);

24) To confirm this temperature press "**ENTER**" until you return to the beginning of the STEP;

25) **Note:** This way, we have inserted 21°C as the temperature of the cooling solvent during the c irculation of the drum filter;

26) Press the "**ENTER**" key and the time will flash;

27) Type 7 on the numeric keypad and confirm with the "**ENTER**" key, and the seconds will blink;

28) Press ↗ to insert the time and confirm with the "**ENTER**" key causing us to go on to the 4th STEP;

29) **(Returning the solvent to the first tank)**
Clear all previously inserted keys. Push the function keys n° 1-21-22-28 and confirm with the "**ENTER**" key and the time will blink.

30) Type 3 and 0 on the numeric keypad and confirm with the "**ENTER**" key, and the seconds will blink;

31) Press the "**ENTER**" key to confirm and 5th STEP will flash;

32) **(Spin Cycle)**
Clear all previously inserted keys. Push the function keys n° 4-21-22-28 and confirm with the "**ENTER**" key causing the time to flash;

33) Type 3 on the numeric keypad and confirm with the "**ENTER**" key and the seconds will blink;

34) Push ↗ to insert the time and confirm with the "**ENTER**" key, and the 6th STEP will flash;

35) **(Stopping and Emptying the Drum)**
Clear all previously inserted keys. Push the function keys n° 21-22-28 confirm with the "**ENTER**" key and the time will blink;

36) Type 3 and 0 on the numeric keypad and confirm with the "**ENTER**" key and the seconds will blink;

37) Press "**ENTER**" to confirm causing the 7th STEP to flash;

38) **(Drying; Part 1)**
Clear all previously inserted keys. Push the function keys 1-6-7-8;

39) **Note:** If you wish to dry in this STEP with the **DRUM AIR INLET** at 65°C you need to proceed as follows;

40) Press button ***51*** (**TEMPERATURE CONTROL**) until **DRUM INLET** appears on the screen, and the temperature value blinks;

41) Type in the temperature on the numeric keypad; for 65°C type in 6 and 5;

42) To confirm this value and exit from the temperature screen, push the "**ENTER**" key until you return to the beginning of the STEP;

43) Press "**ENTER**" and the time will blink;

44) Type in 5 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to flash;

45) Press ↗ to insert the time and confirm with the "**ENTER**" key, and the 8th STEP will blink;

46) **(Drying and Emptying the Drum)**
Clear all previously inserted keys. Push the function keys n° 1-6-7-8-21-22-28.
If you do not wish to insert a temperature in this STEP, the machine will automatically use the default value;

47) Press "**ENTER**" and the time will flash;

48) Type 2 and 0 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

49) Press "**ENTER**" to confirm and the 9th STEP will flash;

50) **(Drying with DRY-CONTROL; Part 2)**

Clear all previously inserted keys. Push the function keys n° 1-6-7-8-9;

51) **Note:** If you wish to dry in this STEP with the **DRUM AIR INLET** at 75°C you need to proceed as follows;

52) Press button ***51*** (**TEMPERATURE CONTROL**) until **DRUM INLET** appears on the screen, and the temperature value blinks;

53) Type in the temperature on the numeric keypad; for 75°C type in 7 and 5;

54) To confirm this value and exit from the temperature screen, push the "**ENTER**" key until you return to the beginning of the STEP;

55) Press "**ENTER**" and the time will flash;

56) Type 2 and 0 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

57) Press ↗ to insert the minute and confirm with the "**ENTER**" key, the 10th STEP will flash;

58) **(Drying; Part 3)**

Clear all previously inserted keys. Push the function keys n° 1-6-7-8.

59) **Note:** If you wish to dry in this STEP with the **DRUM AIR INLET** at 70°C you need to proceed as follows;

60) Press button ***51*** (**TEMPERATURE CONTROL**) until **DRUM INLET** appears on the screen, and the temperature value blinks;

61) Type in the temperature on the numeric keypad; for 70°C type in 7 and 0;

62) To confirm this value and exit from the temperature screen, push the "**ENTER**" key key until you return to the beginning of the STEP;

63) Press "**ENTER**" and the time will flash;

64) Type 5 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

65) Press ↗ to insert the minute and confirm with the "**ENTER**" key, and the 11th STEP will flash;

66) **(Cooling; Part 4)**

Clear all previously inserted keys. Push the function keys n° 1-6-7.

67) **Note:** If you wish to cool the garments at a temperature of 40°C during the first phase of ventilation reduction, proceed as follows;

68) Press button ***51*** (**TEMPERATURE CONTROL**) until **DRUM COOLING** appears on the screen, and the temperature value blinks;

69) Type in the temperature 40°C (type 4 and 0); and immediately insert the button ***52*** (**PAUSE TEMPERATURE**);

70) To confirm this value and exit from the temperature screen, push the "**ENTER**" key until you return to the beginning of the STEP;

71) Press "**ENTER**" and the time will flash;

72) Type 5 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

73) Press ↗ to insert the minute and confirm with the "**ENTER**" key, and the 12th STEP will flash;

74) **(End of Cycle and Load-Counter)**

Clear all previously inserted keys. Push the function key n° 11; confirm with the "**ENTER**" key causing the time to flash;

75) Type 2 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

76) Press "**ENTER**" to confirm the time and the 13th STEP will flash;

77) Press "**ESCAPE**" twice to terminate the programming and return to **STANDBY** mode;

78) Otherwise, press "**ESCAPE**" only once, and **EXIT PROGRAM NO** will appear on the screen. You can continue to program by pushing "**ENTER**" . Pressing the ↗ key will get you to the **EXIT PROGRAM YES** Screen, and by confirming with the "**ENTER**" key, you can exit out of the program and return to **STANDBY**.

5.12.3 Temporary TEMPERATURE MODIFICATION

During the execution of a program (automatic cycle) it is possible to modify the 5 programmable temperatures:

- DRUM INLET
- COOLING DRUM
- OUTLET DRUM
- COOLING SOLVENT
- SOLVENT HEATING

for the whole duration of the program , acting as follows:

1) During the automatic execution of a program, press the key ***51*** *(TEMPERATURE CONTROL)* located on the **ADDITIONAL CONTROL PANEL.**

2) The first parameter "**DRUM INLET** " will appearafter which it will be possible to have access to the following ones pressing on buttons ↙ ↗.

3) Select a parameter pressing on button **"ENTER";**

4) Insert the new value through the numeric keyboard and press **"ENTER"** to confirm;

5) Once setting operations of the different parameters are finished, press button **"ESCAPE "** for outgoing from menu and return STANDBY mode.

NOTE: At the end of the programs in course, the temperature values will return the ones memorized in the program.

NOTE: If you wish to carry out a modification of the temperature values permanently, see Par. 5.11.4 TEMPERATURE, TURNS VARIATION.

5.12.4 CONTEMPORARY VISUALIZATION OF 4 TEMPERATURES ON THE DISPLAY *(IN STANDBY MODE AND AUTOMATIC EXECUTION)*

On the display it is possible to visualize contemporary, in ***STANDBY*** mode or in ***AUTOMATIC EXECUTION*** , the values of following 4 temperatures:

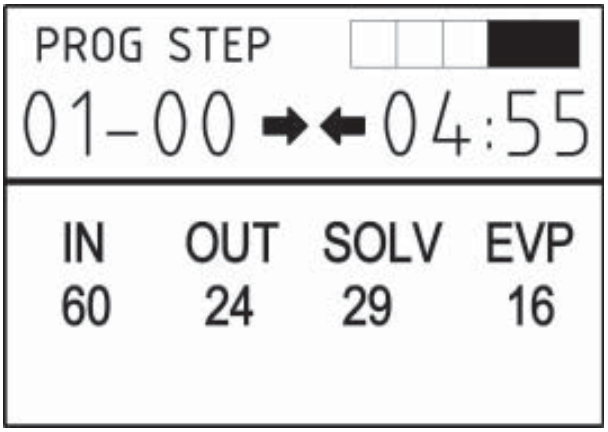
- DRUM INLET
- DRUM OUTLET
- SOLVENT COOLING
- EVAPORATOR OUTLET

For visualizing contemporary the 4 above described temperatures,act as follows:

1) The computer has to be in STANDBY or in **AUTOMATIC EXECUTION;**

2) Press consequently the buttons of the numeric keyboard ;

3) The display will visualize the 4 temperatures as per following example:



Where:

IN = DRUM INLET

OUT = DRUM OUTLET

SOLV = SOLVENT COOLING

EVP = EVAPORATOR OUTLET

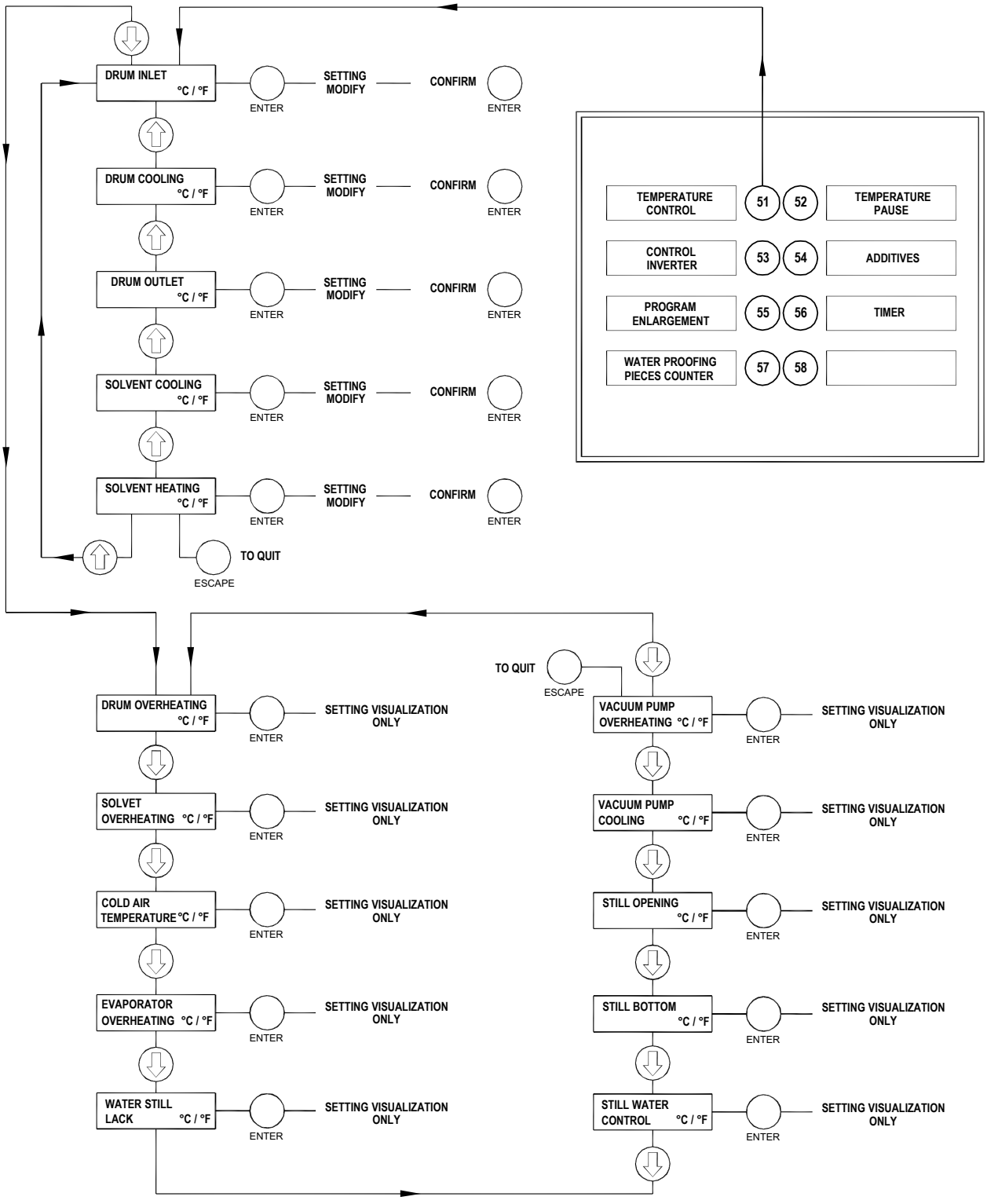
NOTA: The visualization of the 4 temperatures will be temporarily interrupted when appearing a control or alarm signal of the computer; At the end, the visualization of the 4 temperatures will be reset on the display.

For removing the visualization of the 4 temperatures , act as follows:

Press the buttons of the numeric keyboard .

NOTE: If the machine is switched off with the IN-OUT-SOL-EVP temperatures activated, these temperatures will be shown again on the display the next time the machine is switched on.

5.12.5 TEMPERATURES VISUALISATION (HYDROCARBON MACHINES): IN STANDBY, IN MANUAL AND IN AUTOMATIC PROCESSING



5.12.6 TEMPERATURES SETTING FOR HYDROCARBON SOLVENT MACHINES

PTC N°	TEMPERATURE DESCRIPTION	DIFF.	MINIMUM VALUE	MAXIMUM VALUE	DEFAULT / SET
PTC 1	DRUM AIR INLET	**-01**/*-02*	**040°C**/*104°F*	**080°C**/*176°F*	**075°C**/*167°F*
	DRUM COOLING	**001**/*02*	**025°C**/*77°F*	**050°C**/*122°F*	**040°C**/*104°F*
	DRUM OVERHEATING	**001**/*02*	**090°C**/*194°F*	**100°C**/*212°F*	**095°C**/*203°F*
PTC 2	DRUM AIR OUTLET	**-01**/*-02*	**040°C**/*104°F*	**070°C**/*158°F*	**065°C**/*149°F*
PTC 3	SOLVENT COOLING	**001**/*02*	**020°C**/*68°F*	**030°C**/*86°F*	**020°C**/*68°F*
	SOLVENT OVERHEATING	**001**/*02*	**040°C**/*104°F*	**050°C**/*122°F*	**050°C**/*122°F*
PTC 4	COLD AIR TEMPERATURE	**-01**/*-02*	**004°C**/*39,2°F*	**008°C**/*46,4°F*	**005°C**/*41°F*
	EVAPORATOR OVERHEATING	**001**/*02*	**030°C**/*86°F*	**050°C**/*122°F*	**050°C**/*122°F*
PTC 5	WATER STILL LACK	**001**/*02*	**035°C**/*95°F*	**050°C**/*122°F*	**050°C**/*122°F*
PTC 6	STILL WATER CONTROL	**001**/*02*	**000°C**/*32°F*	**030°C**/*86°F*	**030°C**/*86°F*
PTC 7	STILL BOTTOM CONTROL	**-05**/*-05*	**110°C**/*230°F*	**149°C**/300*°F*	**135°C**/*275°F*
					148°C/*298°F*
PTC 8	STILL OPENING	**-01**/*-02*	**036°C**/*96,8°F*	**045°C**/*113°F*	**040°C**/*104°F*
PTC 11	VACUUM PUMP COOLING	**001**/*02*	**025°C**/*77°F*	**035°C**/*95°F*	**035°C**/*95°F*
	VACUUM PUMP OVERHEATIING	**001**/*02*	**040°C**/*104°F*	**050°C**/*122°F*	**045°C**/*113°F*
PTC 12	SOLVENT HEATING	**000**/ *000*	**025°C**/*77°F*	**040°C**/*104°F*	**040°C**/*104°F*

5.13 INVERTER

In the past the computer could neither manage nor control the speed of the motor drum and the ventilator motor. Today this control is now possible using the little **ADDITIONAL CONTROL PANEL**. Using the **ADDITIONAL CONTROL PANEL**, you can control and manage different speeds at every STEP of a program to meet your numerous washing needs.

5.13.1 DESCRIPTION OF INVERTER SPEEDS

1) The speeds of the inverter were already set by the manufacturer, based on the model. But it is possible to vary these speeds within a pre-defined range.

Here is an example from the menu:

2)

Drum calibration	
Turns	000

Allows you to calibrate the exact number of revolutions with an apparatus that monitors them.
This value can only be set by the manufacturer.
Standard Setting: 000 RPM.

3)

Washing	
Minimum	020

Allows you to set the minimum speed, under which the machine will cannot be set.
Standard Setting: 020 RPM.

4)

Washing	
Maximum	050

Allows you to set the maximum speed, over which the machine will cannot be set.
Standard Setting: 050 RPM.

5)

Washing	
Default	040

Allows you to set the normal working RPM.
This value can be varied and programmed at any time without going to the menu.
Standard Setting: 040 RPM.

6)

Slow spin	
Minimum	200

Allows you to set the minimum speed, under which the machine will cannot be set.
Standard Setting: 200 RPM.

7)

Slow spin	
Maximum	300

Allows you to set the maximum speed, over which the machine will cannot be set.
Standard Setting: 300 RPM.

8)

Slow spin	
Default	300

Allows you to set the normal working RPM.
This value can be varied and programmed at any time without going to the menu.
Standard Setting: 300 RPM.

9)

Fast spin	
Minimum	300

Allows you to set the minimum speed, under which the machine will cannot be set.
Standard Setting: 300 RPM.

10)

Fast spin	
Maximum	530

Allows you to set the maximum speed, over which the machine will cannot be set.
Standard Setting: 530 RPM.

11) Fast spin / Default 500

Allows you to set the normal working RPM.
This value can be varied and programmed at any time without going to the menu.
Standard Setting: 500 RPM.

12) Ventilator calibration / Turns 0000

Allows you to calibrate the exact number of revolutions with an apparatus that monitors them.
This value can only be set by the manufacturer.
Standard Setting: 0000 RPM.

13) Ventilator / Minimum 0000

Allows you to set the minimum speed, under which the machine will cannot be set.
Standard Setting: 0000 RPM.

14) Ventilator / Maximum 0000

Allows you to set the maximum speed, over which the machine will cannot be set.
Standard Setting: 0000 RPM.

15) Ventilator / Default 0000

Allows you to set the normal working RPM.
This value can be varied and programmed at any time without going to the menu.
Attention: the setting of this value has to be done on each singol machine.
Standard Setting: 0000 RPM.

5.13.2 PROGRAMMING DIFFERENT INVERTER SPEEDS

The programmable speeds of the drum are:

A) **WASHING:** minimum 20 RPM - maximum 50 RPM.

B) **SLOW SPIN:** minimum 200 RPM - maximum 300 RPM.

C) **FAST SPIN:** minimum 300 RPM - maximum 530 RPM.

NOTE: *The drum speeds can only be set within the limits stated above.*

NOTE: *During programming, the pre-defined speeds are memorized in the same program (default values). To modify these values, you must change them from the MODIFY PROGRAM display.*

To insert a new program with different temperatures, proceed as follows:
Example of a Wash Program with one wash on filter 1 and drying with speed control (program 01).

1) The computer must be on **STANDBY**;

2) Select program number 01 (see **SELECT PROGRAM**);

3) Push the ↗ key to visualize **PROGRAMMING**;

4) Push the "**ENTER**" key to visualize **PROGRAM CONTROL**;

5) With the "**ENTER**" key scroll down the menu to find **NEW PROGRAM**;

6) Push the "**ENTER**" key;

7) Insert password n° **621** on the numeric keypad;

8) Push the "**ENTER**" key to visualize the first STEP of the program that will be blinking.

9) Use the programming example (see file card N° 1);

10) For example: **(self-drawing pump)**
Push function keys n° 1-12-22-28;

11) Press key n° ***53*** (**INVERTER CONTROL**) on the **ADDITIONAL CONTROL PANEL** until **WASHING TURNS** appears on the screen and a value will be flashing;

12) Insert the RPM desired on the numeric keypad (for example 40 - type 4 and 0);

13) To confirm the new value and exit from the screen push the "**ENTER**" key until you arrive at the beginning of the STEP;

14) **Note:** In this example, we have inserted 40 as the RPM during the pump triggering;

15) Press the "**ENTER**" key and the time will flash;

16) Type 2 and 0 on the numeric keypad and confirm with the "**ENTER**" key. Now the seconds will blink;

17) Press "**ENTER**" to confirm the seconds and the 2nd STEP will flash;

18) **(Reaching the solvent level in the drum of the first holding tank)**

Clear all previously inserted keys. Push the function keys n° 1-12-15-28 and confirm with the "**ENTER**" key, and the time will blink;

19) Type 4 and 0 on the numeric keypad and confirm with the "**ENTER**" key, causing the seconds to blink;

20) Press "**ENTER**" to confirm and go to the 3rd STEP;

21) **(Solvent circulation through filter 1 with the drum and varied of the washing speed))**

Clear all previously inserted keys. Push the function keys n° 1-15-16-21-28;

22) Push the ***53*** button (**INVERTER CONTROL**) on the **ADDITIONAL CONTROL PANEL** until **WASHING TURNS** appears on the screen, and a value will blink;

23) Type the desired number of RPM on the numeric keypad (for example for 45 - type 4 and 5);

24) To confirm this value press "**ENTER**" until you return to the beginning of the STEP;

25) **Note:** This way, we have inserted 45 RPM as speed into the washing during the circulation of the drum filter;

26) Press the "**ENTER**" key and the time will flash;

27) Type 7 on the numeric keypad and confirm with the "**ENTER**" key, and the seconds will blink;

28) Press ↗ to insert the time and confirm with the "**ENTER**" key causing us to go on to the 4th STEP;

29) **(Returning the solvent to the first tank)**

Clear all previously inserted keys. Push the function keys n° 1-21-22-28 and confirm with the "**ENTER**" key and the time will blink.

30) Type 3 and 0 on the numeric keypad and confirm with the "**ENTER**" key, and the seconds will blink;

31) Press the "**ENTER**" key to confirm and 5th STEP will flash;

32) **(Spin Cycle)**

Clear all previously inserted keys. Push the function keys n° 4-21-22-28;

33) Push the ***53*** button on the **ADDITIONAL CONTROL PANEL** until **FAST SPIN TURNS** appears on the screen, and a value will blink;

34) Type the desired number of RPM on the numeric keypad (for example for 400 - type 4 - 0 - 0);

35) To confirm this value press "**ENTER**" until you return to the beginning of the STEP;

36) Press "**ENTER**" and the time will blink;

37) Type 3 on the numeric keypad and confirm with the "**ENTER**" key and the seconds will blink;

38) Push ↗ to insert the time and confirm with the "**ENTER**" key, and the 6th STEP will flash;

39) **(Stopping and Emptying the Drum)**

Clear all previously inserted keys. Push the function keys n° 21-22-28 confirm with the "**ENTER**" key and the time will blink;

40) Type 3 and 0 on the numeric keypad and confirm with the "**ENTER**" key and the seconds will blink;

41) Press "**ENTER**" to confirm causing the 7th STEP to flash;

42) **(Drying; Part 1)**

Clear all previously inserted keys. Push the function keys n° 1-6-7-8;

43) **Note:** During this STEP, if needed to change the washing speed (number of RPM) you must proceed as described before (see points from n° 11 to 14);

44) Press "**ENTER**" and the time will blink;

45) Type in 5 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to flash;

46) Press ↗ to insert the time and confirm with the "**ENTER**" key, and the 8th STEP will blink;

47) **(Drying and Emptying the Drum)**

Clear all previously inserted keys. Push the function keys n° 1-6-7-8-21-22-28.
If you do not wish to insert a temperature in this STEP, the machine will automatically use the default value;

48) Press "**ENTER**" and the time will flash;

49) Type 2 and 0 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

50) Press "**ENTER**" to confirm and the 9th STEP will flash;

51) **(Drying with DRY-CONTROL; Part 2)**

Clear all previously inserted keys. Push the function keys n° 1-6-7-8-9;

52) Press "**ENTER**" and the time will flash;

53) Type 2 and 0 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

54) Press ↗ to insert the minute and confirm with the "**ENTER**" key, the 10th STEP will flash;

55) **(Drying; Part 3)**

Clear all previously inserted keys. Push the function keys n° 1-6-7-8.

56) Press "**ENTER**" and the time will flash;

57) Type 5 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

58) Press ↗ to insert the minute and confirm with the "**ENTER**" key, and the 11th STEP will flash;

59) **(Cooling; Part 4)**

Clear all previously inserted keys. Push the function keys n° 1-6-7.

60) Press "**ENTER**" and the time will flash;

61) Type 2 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

62) Press ↗ to insert the minute and confirm with the "**ENTER**" key, and the 12th STEP will flash;

63) **(End of Cycle and Load-Counter)**

Clear all previously inserted keys. Push the function key n° 11; confirm with the "**ENTER**" key causing the time to flash;

64) Type 2 on the numeric keypad and confirm with the "**ENTER**" key causing the seconds to blink;

65) Press "**ENTER**" to confirm the time and the 13th STEP will flash;

66) Press "**ESCAPE**" twice to terminate the programming and return to **STANDBY** mode;

67) Otherwise, press "**ESCAPE**" only once, and **EXIT PROGRAM NO** will appear on the screen. You can continue to program by pushing "**ENTER**". Pressing the ↗ key will get you to the **EXIT PROGRAM YES** Screen, and by confirming with the "**ENTER**" key, you can exit out of the program and return to **STANDBY**.

The programmable speeds of the ventilator are: **(ON SPECIAL REQUEST)**

A) VENTILATOR: minimum ___ RPM - maximum ___ RPM.

NOTE: *The ventilator speeds can only be set within the limits stated above.*

NOTE: *During programming, the pre-defined speeds are memorized in the same program (default values). To modify these values, you must change them from the MODIFY PROGRAM display.*

5.13.3 Temporary SPEED MODIFICATION

During the execution of a program (automatic cycle) it is possible to modify following speed values

- WASHING
- SLOW EXTRACTION
- QUICK EXTRACTION
- FAN

for the whole duration of the program, acting as follows:

1) During the execution of a program press button ***53*** (INVERTER CONTROL) on the A**DDITIONAL CONTROL PANEL.**

2) First parameter **"WASHING"** will appear, after which it is possible to get to following parameters pressing on buttons ↙ ↗.

3) Select a parameter pressing on button **"ENTER"**.

1) Insert the new value by means of the numeric keyboard and press **"ENTER"** to confirm.

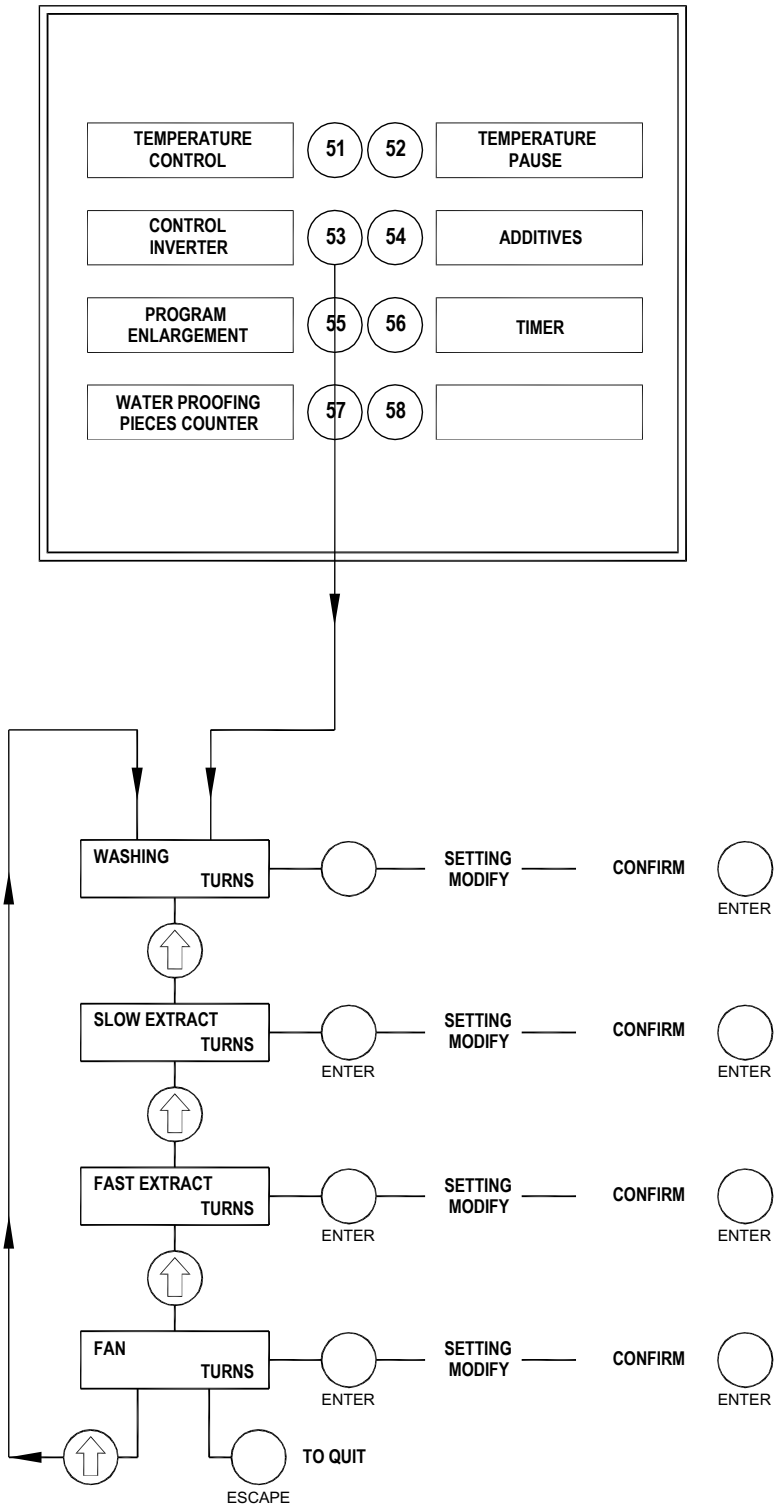
2) Finished the setting operations of the different parameters, press button **"ESCAPE"** for getting out of the MENU and return to STANDBY mode

NOTE: at the end of the program, the speed values will return to be those memorized in the program.

NOTE is you want to carry out a modification of the speed values "permanently" see par 5.11 VARIATION TEMPERATURE, TURNS.

5.13.4 INVERTER SPEEDS VISUALISATION: IN STANDBY, IN MANUAL AND IN AUTOMATIC PROCESSING

WITH
DRUM CALIBRATION TURNS ≠ 0
VENTILATOR CALIBRATION TURNS ≠ 0



5.14 INLETS DESCRIPTION AND RESPECTIVE ALARMS

Common inlets: .....**Input C11 (Pin 1)**
(Protected by a fuse)

A2 Motors overload alarm.....**Imput C11 (Pin 2)**
It occurs when any motor takes over too much current.

It disables all the functions, except switches and "**OPEN/LOCK**".

A3 Still water alarm.....**Input C11 (Pin 3)**
It occurs when it lacks water in circuit or it occurs a water pressure decrease during the distillation.
It disables all the functions, except the switch "**OPEN/LOCK**". When using the **ADDITIONAL CONTROL PANEL** this inlet is not connected.

A4 Refrigeration water alarm.....**Input C11 (pin 4)**
It comes on when: There is no water in the line; there is a drop in pressure; or the water line is too hot.
It disables all the functions, except the switch "**OPEN/LOCK**".

A5 Still full alarm.....**Input C11 (pin 5)**
It occurs when the still is too full.

It disables all the functions, except switches and "**OPEN/LOCK**"

A6 Antifreeze.....**Input C11 (pin 6)**
Check when the evaporator outlet falls below 5°C.
This momentarily disconnects the refrigeration unit.
Using the **ADDIONAL CONTROL PANEL** this inlet is not connected.

A7 Loading door open alarm.....**Input C11 (pin 7)**
It occurs if any safety microswitch of the doors intervenes.

It disables all the functions, except the switches and .

A8 Still boiler water alarm (only electric version).....**Input C11 (pin 8)**
It comes on when the water level in the mini distilling boiler is low.
It allows you to end the wash cycle, but will not allow you to begin another as long as the alarm is present.

It disables all the functions, except switches and "**OPEN/LOCK**"

__ Dry Control pause.....**Input C11 (pin 9)**

This inlet pauses the computer and waits for the drying cycle to end.

10 UNISPRAY Pause.....**Input C11 (pin10)**
This inlet pauses the computer and waits for the water-proofing to finish.

A11 Drum overheating Alarm.....**Input C11 (pin 11)**
It comes on when the temperature of the Drum air inlet exceeds the set values.

It disables all the functions, except switches and "**OPEN/LOCK**".

Using the **ADDIONAL CONTROL PANEL** this inlet is not connected.

A12 Decanter full alarm.....**Input C11 (pin 12)**
It occurs when the water collector level is too high.
It permitts to complete the washing cycle and blocks the next starting, till the alarm presence.

It disables all the functions, except switches and "**OPEN/LOCK**".

A13 Still safety valve alarm.....**Input C11 (pin 13)**
It occurs when the still pressure is too high due to an excessive solvent filling.0

A14 Water feeding alarm.....**Input C11 (pin 14)**
It occurs when it lacks water in circuit.
It disables all the functions, except the switch "**OPEN/LOCK**".

A15 Air pressure alarm.....**Input C11 (pin 15)**
It occurs when it lacks air pressure in circuit.
It disables all the function, except the switch "**OPEN/LOCK**".

A16 Steam feeding alarm (only steam version).....**Input C11 (pin 16)**
It occurs when it lacks steam in circuit.
It disables all the functions, except the switch "**OPEN/LOCK**".

___ External pause.....**Input C11 (pin 18)**
When it occurs during the cycle, it puts the computer into pause, keeps the step functions and stops the watch.

___ DRY CONTROL Consent.....**Input C11 (pin 20)**
This inlet is bridged to allow access to **PIN 9** (**DRY CONTROL** Pause)

A103 Start External- Anti-vibration.....**Input C11 (pin 21)**
Allows you to begin a wash cycle by remote control, or if it intervenes during a spin cycle, it activates the anti-vibration mechanism. After 5 attempts, it sets off the alarm (**A103**).

A22 Add Solvent Alarm.....**Input C11 (pin 22)**
If it activates during **non manual** operations, it sets off the alarm and disconnects all the functions. If it activates during **manual** operations, it allows you to add solvent to the machine utilizing the keys n° 22-23-24-25-28.

A104 No N_2 .Gas.....**Input C11 (pin 24)**
It comes on when there is no nitrogen gas in the tank.

A 25 Evaporator Overheating.....**Input C11 (pin25)**
It comes on when the temperature of the outlet evaporator exceeds the set limit.

It deactivates all functions except the key.

Using the **ADDITIONAL CONTROL PANEL** this inlet is not connected.

A 27 No water in the heater mini-boiler (only electric version).....**Input C3 (pin 2)**
It comes on when the water level in the mini distilling boiler is low.
It allows you to end the wash cycle, but will not allow you to begin another as long as the alarm is present.

It disables all the functions, except switches and "**OPEN/LOCK**".

A 28 Drum Overheated Alarm.....**Input C3 (pin 3)**
It comes on when the temperature of the drum air inlet exceeds the security limits established,

It disconnects all functions except the key, and injects nitrogen into the drum.

A 29 Vacuum Pump Overheating Alarm.....**Input C3 (pin 4)**
It comes on when the temperature of the liquid in the vacuum pump exceeds the set values.
It disconnects all functions.
Using the **ADDITIONAL CONTROL PANEL** this inlet is not connected.

A 30 Vacuum Pump at minimum level Alarm.....**Input C3 (pin 5)**
It comes on when the quantity of liquid in the ring is low.
It disconnects all functions.

___ Distiller Pre-separator Discharge.....**Input C3 (pin 7)**
Allows you to discharge the liquid in the drying separator or in the distiller separator.

A 35 Solvent Overheating Alarm......**Input C3 (pin 10)**
It comes on when the temperature of the solvent exceeds the pre-set limits.

It disables all the functions, except the switch .

Using the **ADDITIONAL CONTROL PANEL** this inlet is not connected.

A105 Control Nitrogen Line Sealing Alarm.....**Input C3 (pin 13)**
It comes on when there is no sealing on the nitrogen line.

A 38 Washing Inverter Alarm.....**Input C3 (pin 14)**
It comes on when the washing motor goes into alarm.

It disables all the functions, except the switch .

A106 V2 Valve Blocked
It comes on when the **V2** valve in the nitrogen inlet is not functioning properly.

A108 Peripheral error

It mainly occurs in the following cases:

1) When the extension cable connecting the **ADDITIONAL KEYBOARD** and **ADDITIONAL CONTROL PANEL** are not inserted or are defective.

2) In case of lack of connection in one of the two peripheral (cable 0 or cable 12A disconnected).

3) It can also occur in the case of a failure or short circuit of one (or more) probes unit installed on the machine. This alarm is activated by 2 Amp. fuses located at the back of the **ADDITIONAL CONTROL BOARD** (COMBI) with the function to protect the probes.

This disconnects all functions and sets off an alarm.

A109 End of DRY CONTROL alarms

The message appears on the display of the computer, when the program ends, if the Dry Control step has been completed.

This means that the drying sensor has not tripped.

A111 Alarm – turn still on

This triggers if key "25" is activated in the first step of a program but button "20" of the still is switched off. When the operator switches button "20" on, the display will show "END OF ALARM A111"; press the "START" button to start the program.

If button "20" is switched on when the program starts, the program will be executed normally.

___ **Temperature Probe Alarm**

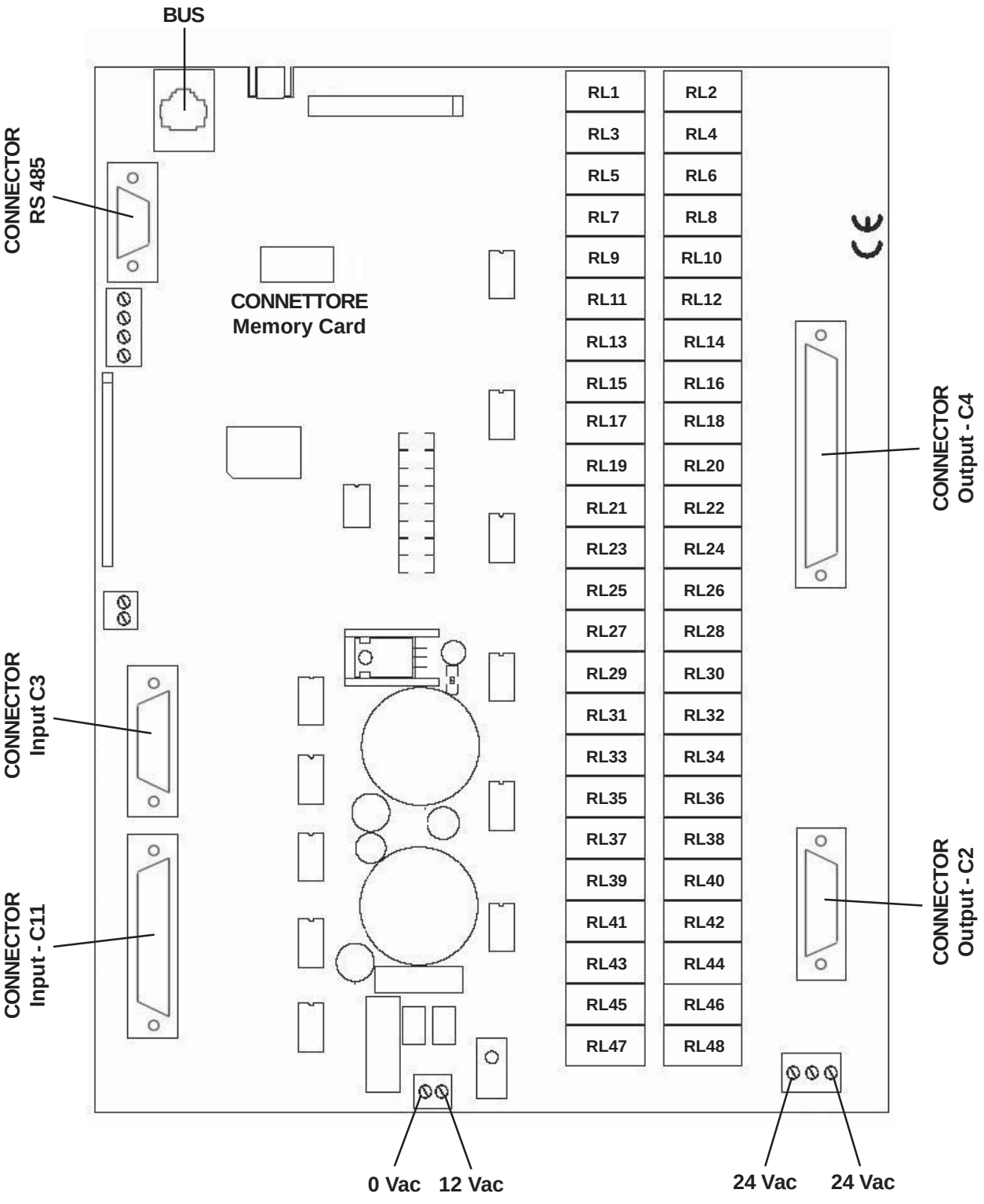
It comes on when the **PTC** probe, which controls the machine's temperature is interrupted.

It disconnects all functions and sets off an alarm.

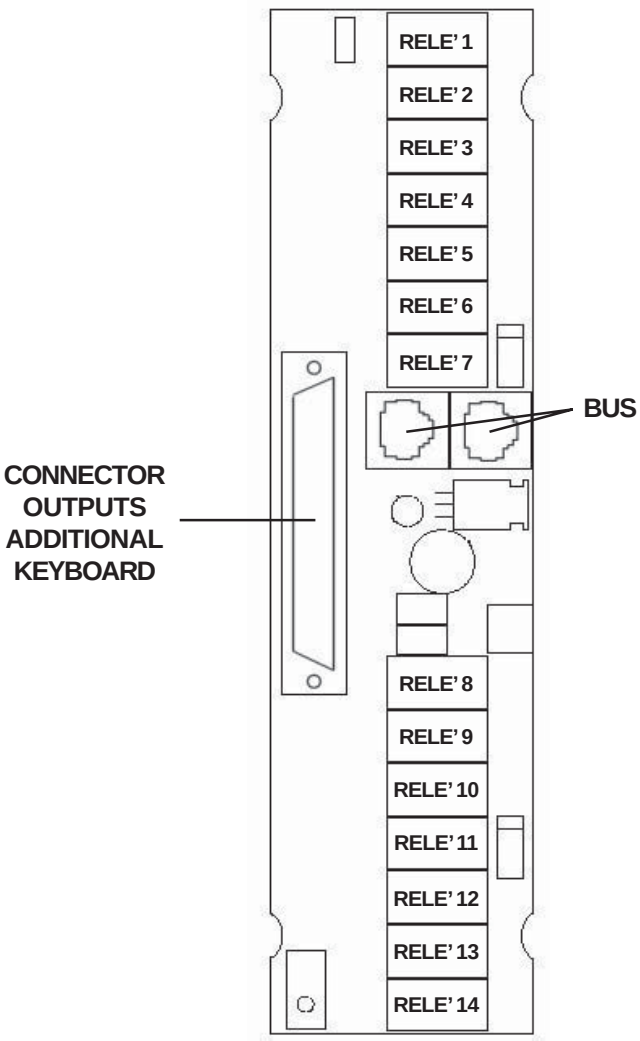
___ **B-O = BLACK OUT**

It comes on when there is no line tension.

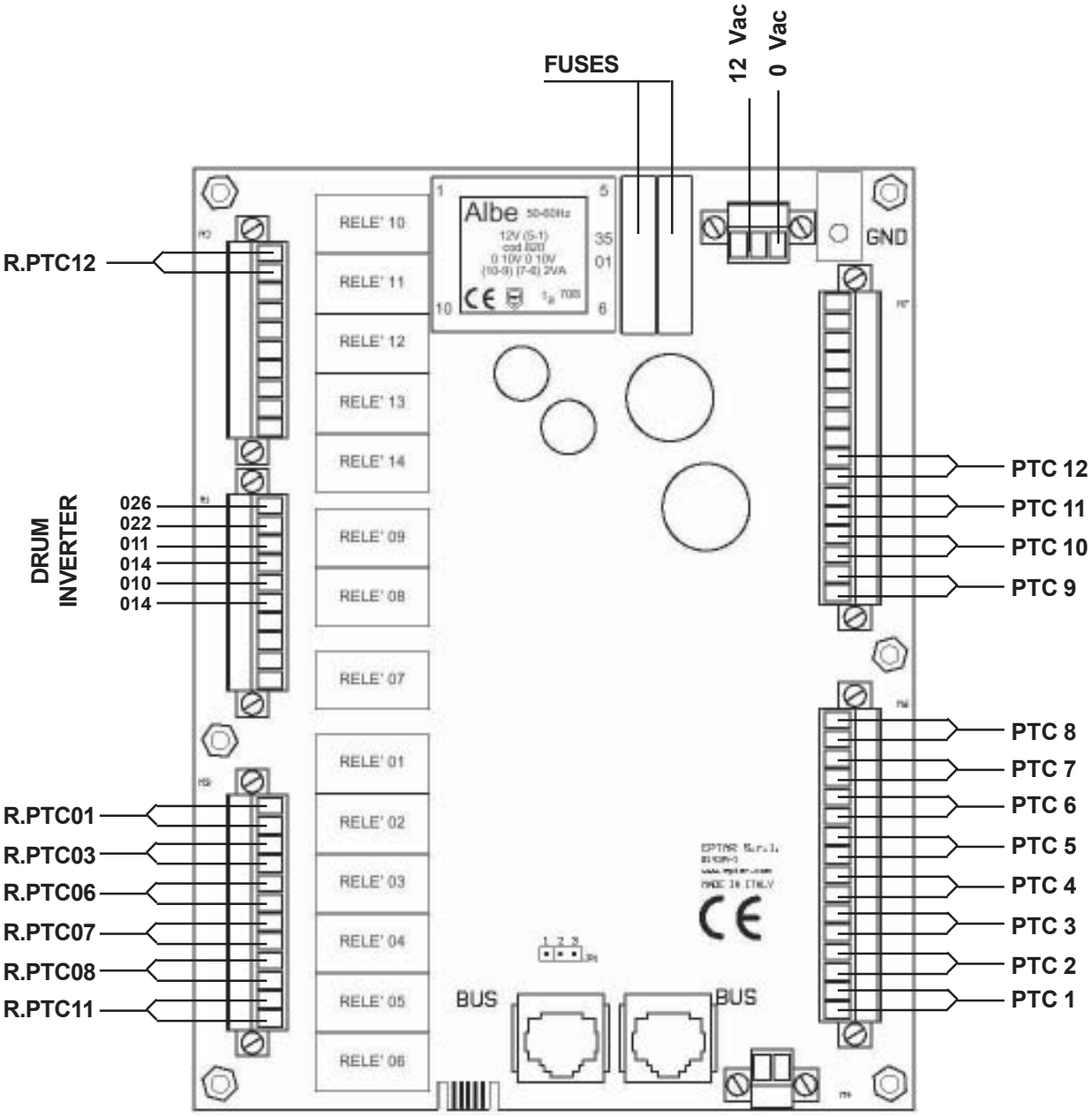
APPENDIX 1 - COMPUTER PIN LAYOUT

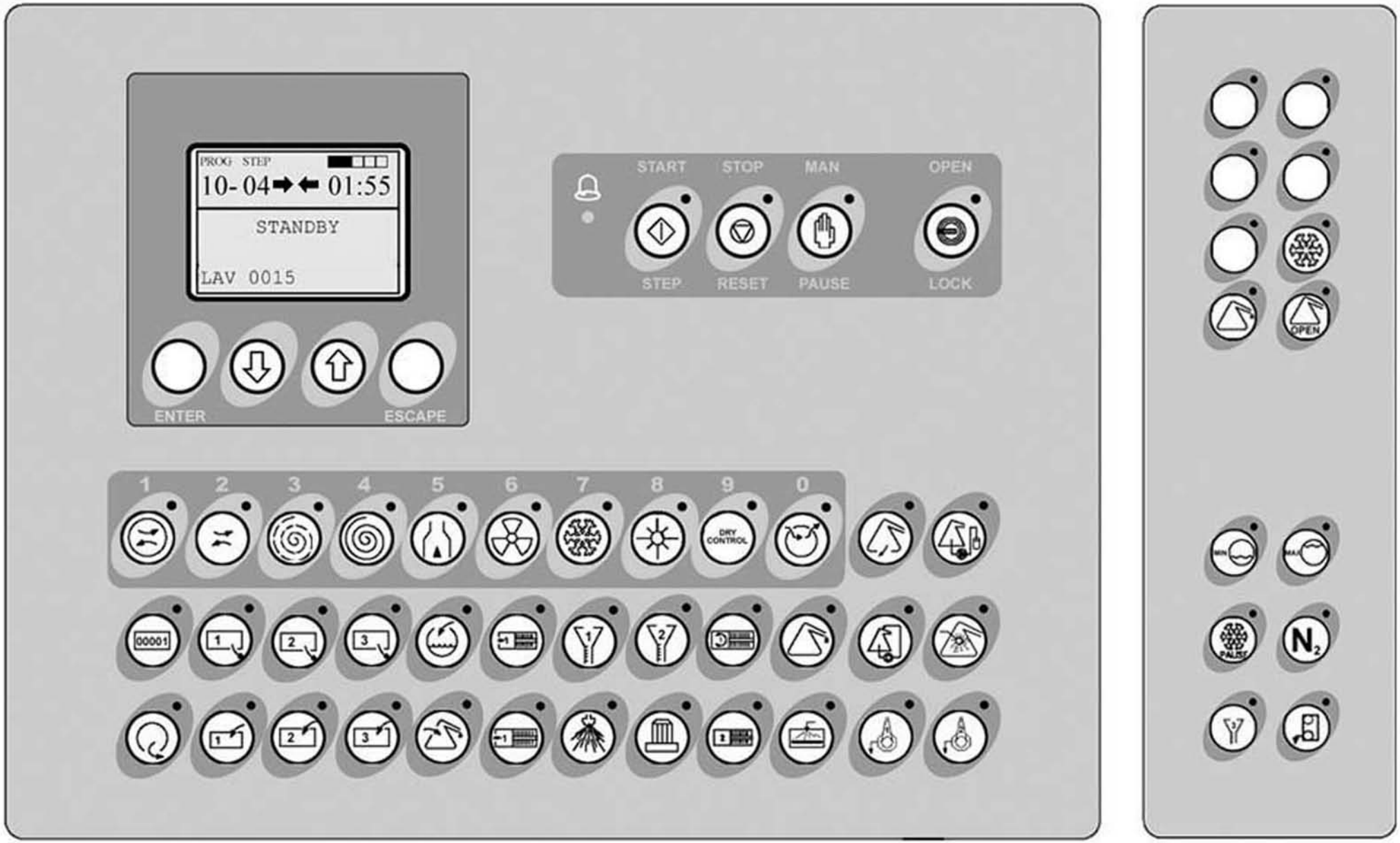


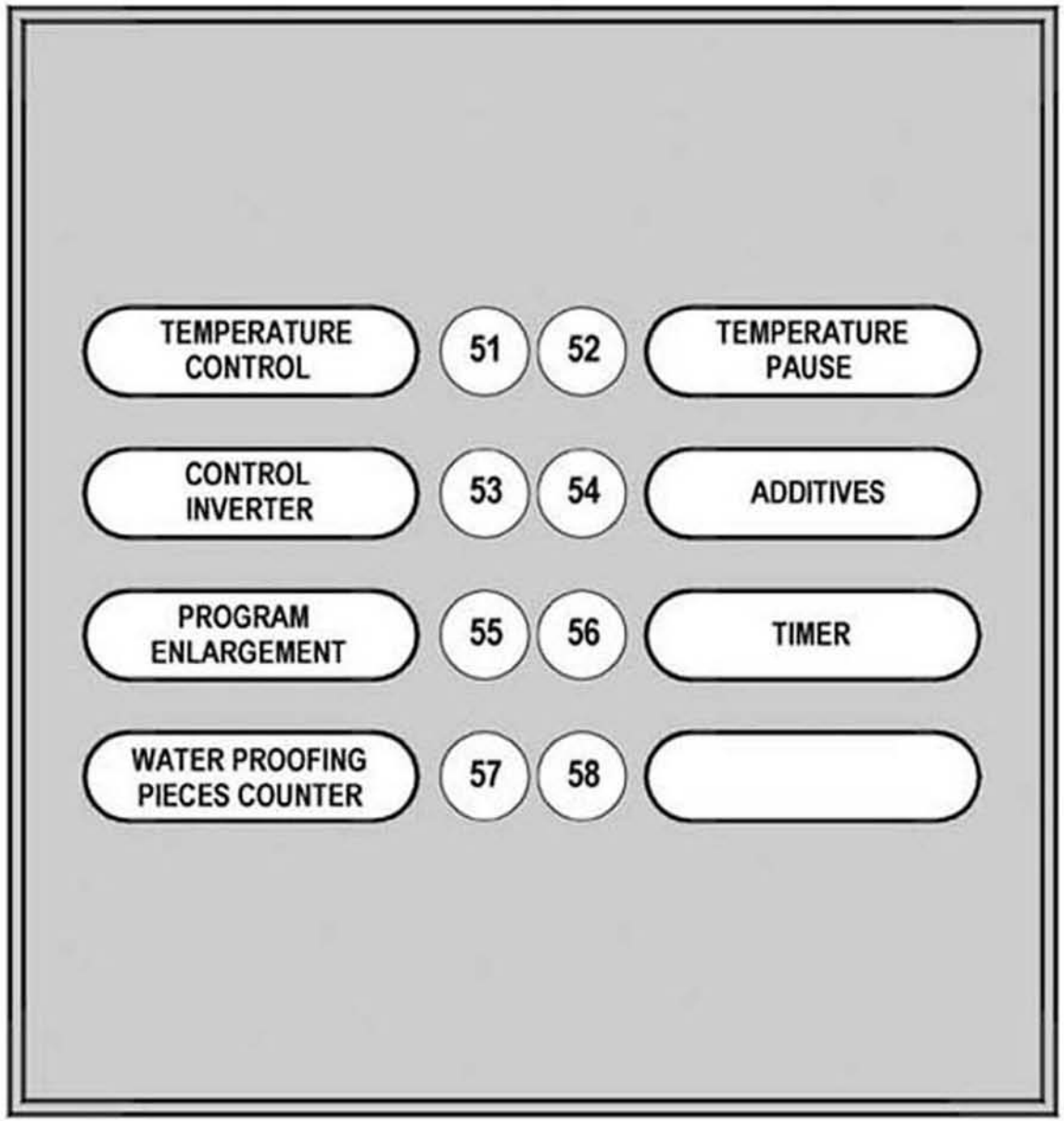
APPENDIX 2 - ADDITIONAL KEYBOARD PERIPHERAL PIN LAYOUT



APPENDIX 3 - ADDITIONAL CONTROL PANEL PERIPHERAL PIN LAYOUT




PROG STEP
10- 04 01:55
STANDBY
LAV 0015
ENTER
ESCAPE
START
STOP
MAN
OPEN
STEP
RESET
PAUSE
LOCK
1 2 3 4 5 6 7 8 9 0
DRY CONTROL
00001
OPEN
MIN
MAX
PULSE
N2


TEMPERATURE CONTROL
51
52
TEMPERATURE PAUSE
CONTROL INVERTER
53
54
ADDITIVES
PROGRAM ENLARGEMENT
55
56
TIMER
WATER PROOFING PIECES COUNTER
57
58